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# Arizona Medicine

*Journal of*

## ARIZONA MEDICAL ASSOCIATION

**ANNUAL**  
**May 4, 5, 6, 7**



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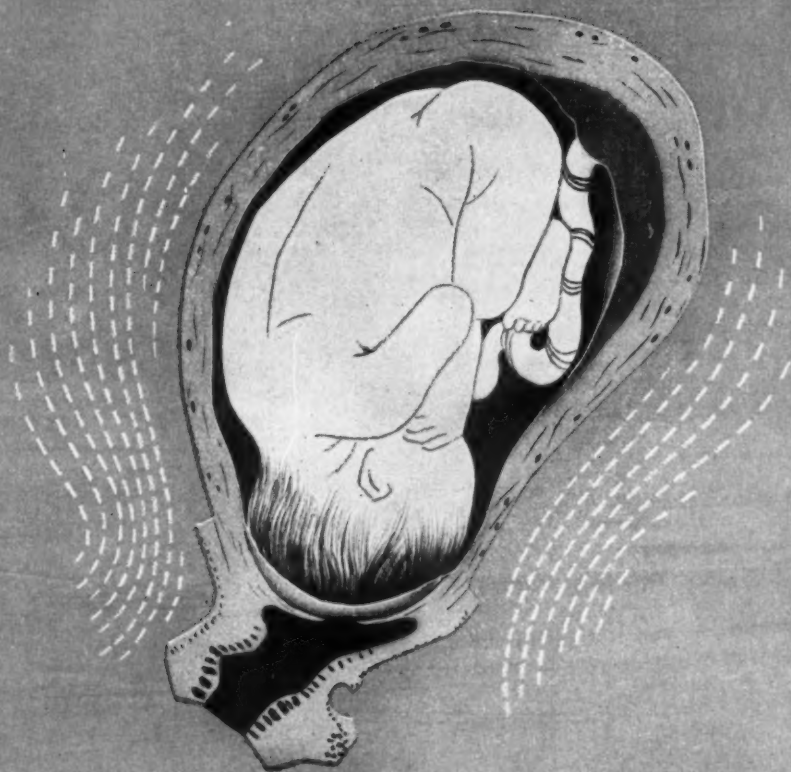
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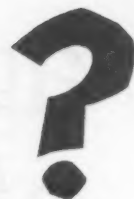
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# ARIZONA MEDICINE

Journal of ARIZONA MEDICAL ASSOCIATION

VOL. 12, NO. 2



FEBRUARY, 1955

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Published monthly by the Arizona Medical Association. Business office at 321 Heard Building, Phoenix, Arizona. Subscription \$3.00 a year, single copy 25c. Entered as second class matter March 1, 1921, at Postoffice at Phoenix, Arizona, Act of March 3, 1879.

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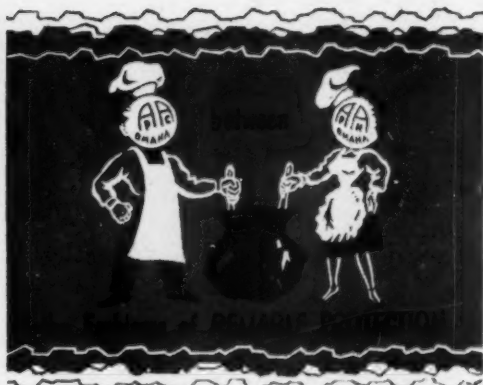
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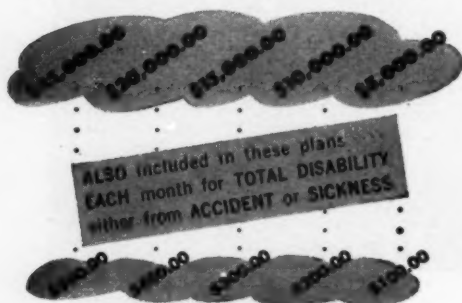
**REFERENCES:** 1. Boland, E. W. and Headley, N. E., *J.A.M.A.* 148:981, March 22, 1952. 2. Ward, L. E., Polley, H. F., Giocumb, C. H. and Hench, P. S., *J.A.M.A.* 152:119, May 9, 1953. 3. Snow, W. B. and Coss, J. A., *N.Y. State J. Med.* 52:319, Feb. 1, 1952.

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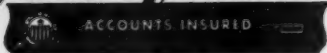
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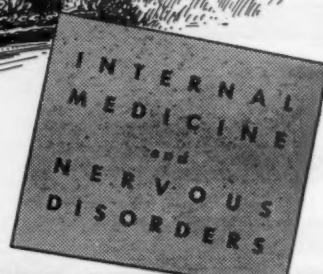
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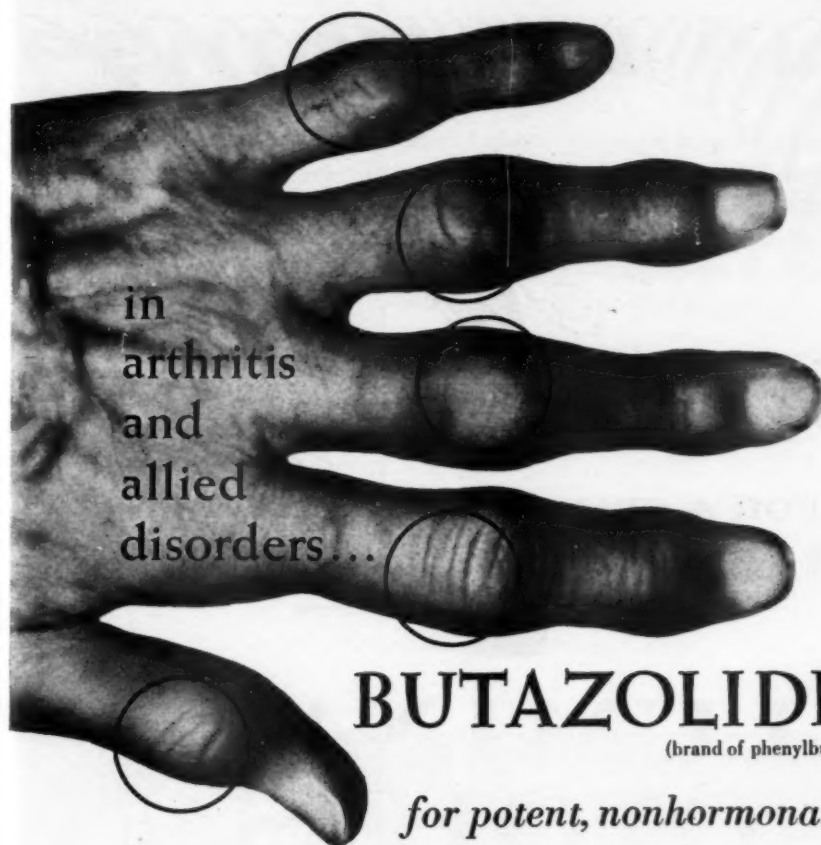
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1. American Medical Association: *New and Nonofficial Remedies*. J. B. Lippincott Co., Philadelphia, 1954, p. 147.

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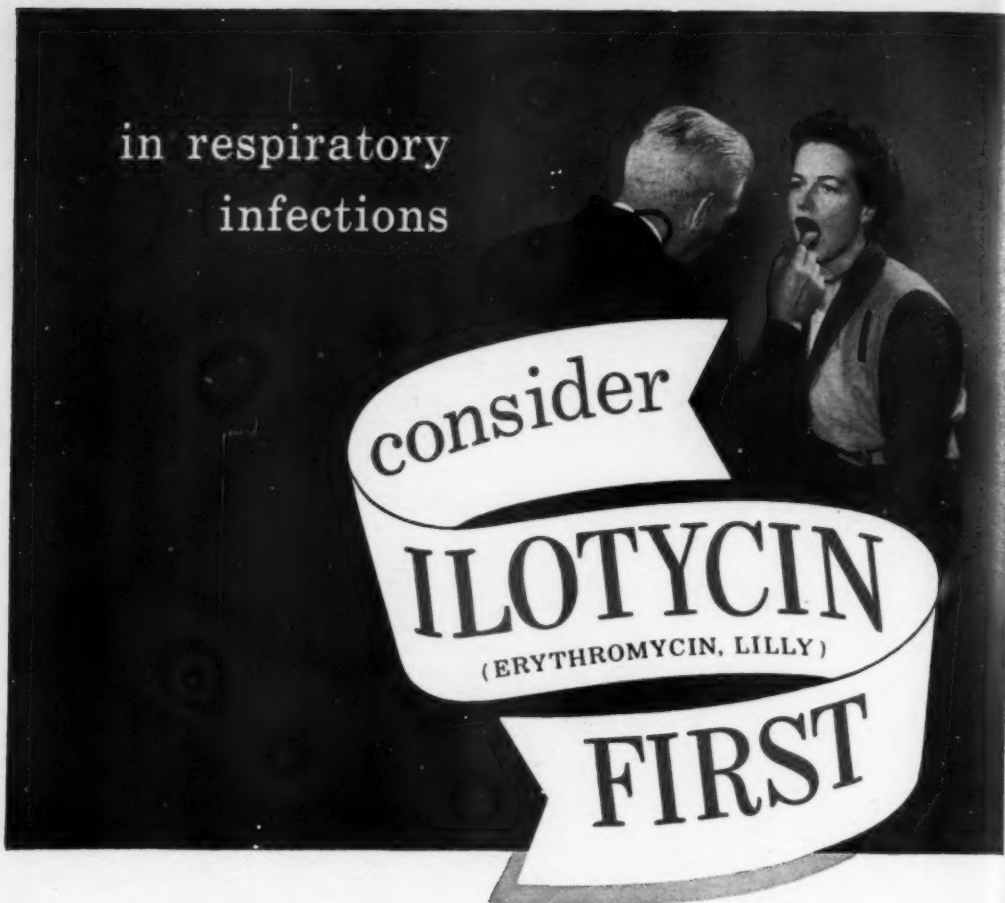
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# ARIZONA MEDICINE

*Journal of Arizona Medical Association*

VOL. 12, NO. 2



FEBRUARY, 1955

## *Original* ARTICLES

### THE ACUTE SURGICAL ABDOMEN\*

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Associate Clinical Professor of Surgery  
College of Medical Evangelists  
Los Angeles, California

IN thinking over ways of making this rather hackneyed but certainly practical subject interesting the most profound and severe critics of all surgeons were asked namely, the County Hospital residents, what they thought would be the most valuable. Their advice was that the discussions presented to them wherein the essayist: are the usual routine manifestations of disease, which they all were expected to know anyway, provided little that was stimulating; but the discussions which gave them the most pearls were the illustrative cases which were educational to the surgeon himself and therefore gave them the benefit of things he had learned the hard way.

This presentation in general will then be of those cases presenting diagnostic problems and problems of management which were educational to the surgeons involved.

In reviewing our surgical services at the County Hospital during the past six months it was noted that in 109 appendectomies 15 per cent revealed no pathology as far as the Pathologist could see it. Even as routine a disease as appendicitis can prove a problem and like golf be a humbling game. We could on the other hand approach it the other way and be proud of the fact that 85 per cent of the time the operation was indicated and the result was excellent with no deaths.

With the advent of antibiotics and improved

knowledge of electrolyte balance, the old philosophy that when reasonable indications for surgery exist a quick look is better than a mistake still would hold. The exception to this doctrine, however, is the acute traumatic abdomen wherein operation should be avoided at all costs unless it is necessary as a life saving procedure.

The decision to operate must not be undertaken lightly because a patient with multiple injuries in whom the abdominal findings might appear consistent with a surgical abdomen might be found due to a retroperitoneal extravasation of blood or a severe back injury or a pneumothorax and the patient might succumb to the multiplicity of his injuries. The conscience of the surgeon might thereafter be troubled because of the definite possibility that his unnecessary exploration had been the final factor which provoked the unfortunate outcome.

How then is one going to tell whether the traumatic abdomen is surgical or non-surgical. In the typical case in which shock and hemorrhage are synonymous or in which the routine film of the abdomen reveals free air or which diodrast injected in the bladder reveals extravasation there is of course no problem. The problem cases are the ones in which there is an initial period of false security and it is seldom that one can be entirely certain at the first examination that surgery is indicated. Repeated examinations may reveal a falling hematocrit and

\* Presented at Annual Meeting of Arizona Academy of General Practice, Phoenix, Arizona, February 5, 1954.

more typical findings and then the necessity to explore may seem obvious. The one finding which has proved most helpful in making the decision to avoid exploration in the absence of the afore mentioned positive laboratory findings has been the presence of active or reasonably active abdominal peristalsis. It has been so infrequent that nonsurgical lesions inhibit peristalsis to the degree of producing a silent or almost silent abdomen, that the surgeon can feel reasonably safe in not operating if peristalsis remains at a reasonably normal level. As you know, the diminution of peristalsis is in proportion to the amount of irritating fluid in the peritoneal cavity which could be gastric and duodenal contents or blood or bile or urine. Therefore, perforations of the small intestine and colon do not give these findings early and the routine x-ray film is invaluable.

One case is that of a 50 year old workman who was brought into the hospital about three hours after having been struck in the abdomen by an emery wheel which had broken from its moorings. Findings were unimpressive except for a grapefruit-sized mass just below and largely to the right of the umbilicus. The mass was soft and rather doughy in consistency and was felt to be blood and clots. The patient was not in shock and x-ray of the abdomen was not taken as it was felt that ligation of the epigastric vessels was in order anyway and exploration could be done at that time. He was operated upon after routine premedication and a large Levine tube with aspiration of the stomach contents was done. This is a necessity on all patients going to surgery who have had food within the previous ten hours as one of the most tragic and untreatable and preventable complications is the death from aspirated vomitus during the induction of an anesthetic.

As the skin incision was made there was the expected mass of blood and clots but to our astonishment there was in addition to complete rupture of the right and left rectus muscles presenting under the skin a loop of terminal ileum which had been completely transected, including about  $2\frac{1}{2}$  inches of the mesentery with beginning gangrene or the torn segment. Five or six other segments in the adjacent ileum had small perforations so that it was necessary to resect about two feet of terminal ileum and perform an end to end anastomosis. Routine quick exploration of the abdomen revealed no

other noteworthy pathology and the abdomen was closed repairing the ruptured rectus sheath. The patient made a satisfactory recovery.

A child three years of age entered the hospital with a slightly distended generally tender abdomen and no other significant findings except a large right inguinal hernia which could be easily reduced but which was quite tender in reduction. In view of this it was felt that possibly a Richter's hernia existed with a partial obstruction and hernioplasty incision was made. Upon opening the hernial sac fresh and some old blood poured out so the incision was promptly closed and an upper left paramedian incision made. A so-called delayed rupture of the spleen was found with clots around the spleen and fresh bleeding as well. A splenectomy was performed and further careful questioning of the mother revealed no evidence of accident except a fall from a swing about two weeks before which had incapacitated the child for a few hours.

It might be well to state at this point that in analyzing the ruptured spleens at the County Hospital, it was felt that in spite of technical difficulties the spleen should be removed in all cases even though the laceration might be a minor one. There were three cases in which because of technical difficulties and the critical condition of the patient, a five yard gauze pack was placed in the area to control the bleeding. All of the patients died and at autopsy it was found that the pack had not controlled the bleeding and hemorrhage had continued. Following splenectomy or suture of lacerations of the liver or repair of any obvious intra-abdominal laceration it is imperative to do a quick general exploration of the abdomen. Any trauma severe enough to rupture one viscus may injure another viscus and 35 per cent of the deaths following splenectomy for ruptured spleen or repair of the liver or other injuries were found to be due to overlooked injuries of the gastrointestinal tract. The surgeon, having had his troubles in doing the difficult procedure, is apt to not suspect further trauma and certainly a meticulous examination of all organs is not in order but a quick examination will reveal suspicious findings in any area where more meticulous search can then be instituted.

Mrs. H. was a 75 year old woman with severe cardiac difficulties. The abdominal pain and findings localized in the right upper quadrant

radiating to the back, associated with high leukocytosis and fever. She was thought to have empyema of the gall bladder but on opening the rectus sheath a complete transverse laceration of the upper right rectus muscle was found with a large hematoma which had dissected upward and around the ribs to the retroperitoneal space in the back. The bleeding epigastric vessels were ligated, the rectus repaired and the peritoneum was not opened in view of the age and cardiac difficulties. The patient made an uneventful recovery.

Another case was that of a 19 year old boy with what appeared to be a typical picture of acute appendicitis with findings limited to the area of McBurney's point and no history of injury except the usual trauma incident to a football game three days before. Upon making an incision it was found that he had a rupture of the deep epigastric vein with a hematoma under the rectus and the clots were evacuated. The vessels were ligated and the abdomen was opened and a normal appendix removed. It is my opinion that whenever feasible with any operation if it does not increase the hazard, an appendectomy should be performed if for no other reason than to make it easier for the next surgeon to eliminate one diagnosis. We have all had the unfortunate experience of seeing an abdominal scar and have the patient assure us that the appendix had been removed and, therefore, delayed treatment until gangrenous or perforated appendicitis ensued.

The appendix in an atypical location may present diagnostic problems and a classical case of course is the one wherein the patient has left lower abdominal pain and the diagnosis is confusing until the medical student who happens to listen to the chest discovers that the heart is on the right side and the unusual case suddenly becomes simplified.

A 32 year old woman had right upper abdominal pain, nausea, vomiting, fever and leukocytosis with pyuria and the diagnosis lay between pericholecystic abscess or perirenal abscess. A urologist, after the usual study was very definite that the diagnosis was perirenal abscess but the kidney was found to be normal at operation and the peritoneum was opened to reveal a ruptured appendix lying beneath the liver and on the kidney. Recovery was uneventful.

A 30 year old waitress with a history of ab-

dominal pain of 10 days duration, had been treated with antibiotics by a competent internist and with improvement and subsidence of symptoms after a week and a feeling of reasonable comfort for three days, when sudden severe lower abdominal pain necessitating hospitalization ensued accompanied by fever and leukocytosis. There was extreme pelvic tenderness bilaterally. Because of the confusing history and the critical appearance of the patient, operation was felt imperative even in the face of what appeared to be pelvic inflammatory disease. An appendiceal abscess was found in the right pelvis which had reruptured apparently about 24 hours earlier. Appendectomy was performed and satisfactory recovery followed but it is well to point out that in general appendiceal, pelvic, pericholecystic and pericolonic diverticular abscesses which at first respond to antibiotics and then rerupture carry a grave prognosis in contradistinction to those which may not respond so well to the antibiotics initially.

Volumes could be written on the patients who have had acute abdominal manifestations and at operation an innocuous appendix was removed and nothing further was done. The presence of mesenteric adenitis in children simplifies matters at least to the level of an honest mistake.

In children, as in adults, the slightly inflamed appendix makes at least some exploration of the abdomen, and particularly recognition of the type of peritoneal fluid present, imperative. Naturally wine colored fluid or bloody fluid, turbid or purulent fluid would demand appropriate enlargement of the incision and exploration to determine the nature of the pathology.

The next two cases present somewhat common complications in children. One case is of a child of 4 years — doctor's grandson — in whom the findings were compatible with severe appendicitis and limited to the right lower quadrant. Rectal examination gave the impression of an ill-defined mass palpable high in the right pelvis. The appendix was found to be mildly injected and covered with some fibrinous exudate but excess fluid was found and a finger toward the pelvis revealed a mass about the size and consistency of a distended gall bladder, lightly adherent to the anterior abdominal wall and the intestines in the mid-line. It was possible to gently maneuver the mass into the incision and a gangrenous Meckel's diverticulum

which had twisted upon itself three times was excised without the necessity of resecting the ileum and satisfactory recovery followed.

Another case is of a nine year old girl with rather typical findings of severe appendicitis but limited to the right upper quadrant, gave us a preoperative diagnosis of acute appendicitis with a failure of rotation and descent of the right colon and the appendix in the right upper quadrant. At exploration it was found that this anomaly was present and the appendix was in the right upper quadrant but was normal and further exploration revealed an ulcer at the base of Meckel's diverticulum which had perforated and was lightly walled off by adjacent loops of intestines and mesentery. The Meckel's was resected and satisfactory recovery followed. As one would expect the diverticulum contained gastric mucosa.

Intestinal obstruction may be simple if the findings are severe and the picture clear cut. The problem which is a trying one for the surgeon is the individual who is emotionally unstable and whose abdomen presents numerous scars and a perusal of whose previous record reveals lysis of numerous adhesions but a certain skepticism because of the absence of the description of a typical obstructive point wherein there was dilated gas filled intestine proximal to the point and collapsed and shrunken intestine distal to it. The use of the intubation tube has possibly one of its best applications here and may get the surgeon by a trying period without having to perform another unnecessary lysis of adhesions. The neurotic patients, however, can have legitimate pathology and the indwelling tube requires someone in the hospital who makes a hobby of its use and a career in following such patients very closely. It is probably most useful in those patients who have recently had surgery, particularly for an inflammatory process wherein the inflammation and edema are producing obstruction and as these subside the obstruction will subside also and when there is no evidence of impairment of circulation its use is gratifying. Unhappily, it often seems to work out that in the patients who need it most it is impossible to get it beyond the pylorus, whereas, in the patients who are not obstructed it will pass readily.

A 46 year old man was first seen in acute fibrillation with typical signs of mechanical small bowel obstruction. The picture was some-

what confused by the fact that the patient had been on massive Penicillin therapy for syphilis for the preceding four weeks. A cardiologist prepared the patient as well as possible within the next 24 hours and while the patient was being draped just after spinal anesthetic was given, tremendous quantities of gas and liquid feces was passed onto the operating table and onto the floor. It was thought best to proceed in spite of the malodorous surroundings because of the possibility of strangulated intestine. At operation a volvulus of the midgut was found with typical mesenteric hemorrhages. The patient ran a stormy course with several pulmonary emboli but finally recovered.

A 19 year old girl had a fairly typical history of subsiding appendicitis for 4 days before she was first seen. No bowel movements were experienced for the past 3 days. Pain and tenderness in both lower quadrants were present and a soft gas-filled mass was felt on the left extending upward beyond the umbilicus toward the right side. Diagnosis of volvulus of the cecum was made and at operation a long thin adhesion was found extending from the left tube to the mid-portion of the mesentery. The cecum was greatly distended and twisted and this adhesive band was the fixed point for the volvulus. There was the usual findings in all of these cases of volvulus of the cecum; namely a failure of attachment of the right colon to the lateral abdominal wall. The sigmoid was also found to have a long mesentery and easily reached into the right upper quadrant. An incidental appendectomy was done and oddly enough the Pathologist reported acute appendicitis which findings were presumably on the basis of impairment of blood supply.

The following case is presented because it illustrates the fact that one must rely on clinical judgment based on examination of the patient and not upon laboratory findings in making a decision. The patient was a 58 year old woman who had a routine gastric resection for duodenal ulcer with almost complete obstruction; convalescence was uneventful, the nasal tube was removed on the third day but on the fifth day the patient vomited small amounts but did not appear critically ill. The next day the patient did not appear to be doing well and presented a rather typical picture associated with edema of the stoma and loss of electrolytes. This impression was confirmed by a low level of blood

chlorides and potassium and a high NPN and  $\text{CO}_2$  combining power. Appropriate electrolytes were given parentally and the next day the intern assured us that the patient was much better because the recheck of the electrolytes revealed essentially normal potassium chlorides,  $\text{CO}_2$  and NPN. A look at the patient, however, dispelled any optimism as she appeared critically ill and the abdomen was distended and moderately rigid. A remark was made to the intern that while the laboratory findings might be normal the patient was going to die unless something was done to correct an obvious acute intra-abdominal catastrophe. X-ray shown revealed a typical volvulus of the cecum with the enormous dilatation of the cecum which is presenting typically in the left upper quadrant of the abdomen. The free air in the abdomen is compatible with the previous operative procedure and at operation the typical failure of attachment of the right colon was seen with the volvulus as shown was found. The diagnosis could have been made earlier had not the picture been somewhat consistent with that frequently seen in vomiting following gastric resection. The area of anastomosis was examined and was normal and the volvulus of the cecum was apparently purely coincidental.

The management of acute cholecystitis is somewhat controversial since several centers have the philosophy of cholecystectomy at all stages of the disease with recorded satisfactory results. These results have not held up in the average hospital with the average surgeon, however, and the cholecystectomy in general is preferred as an elective procedure. There appears to be a good deal of doubt as to what constitutes early operation of the acute gall bladder as the 48 hour period should mean 48 hours after the onset of symptoms and not 48 hours after the surgeon has seen the patient. In the early period the hazard is probably no greater than that of elective cholecystectomy which should be negligible. The survey of the last six months of our services at the County Hospital revealed seven emergency and 32 elective cholecystectomies with no death, whereas, in seven other emergency cholecystectomies there were two deaths.

All the emergency cholecystectomies were on patients with either empyema or pericholecystic abscess and where delay in entering the hospital made for a grave prognosis.

The procedure if empyema or perforation of the gall bladder is suspected should be the simplest one possible, namely drainage of the gall bladder and removal of the stones even though elective cholecystectomy is indicated later for the prevention of further stones or removal of the ones that could not be papated in the cystic duct.

It is my impression that a summary of the opinions of the residents at the County Hospital for the last 20 years would be that in observing all the surgeons there, that except for those men who got in trouble with everything they did there was no serious trouble with gall bladder surgery except in the acute cases wherein the anatomy was unrecognizable because of edema and induration of the tissues.

Patients with perforated ulcer present no diagnostic problem if their findings are typical and particularly if the clinical diagnosis is supported by evidence of free air in the abdomen. Those wherein the clinical evidence is clear cut and there is no free air may be considered candidates for operation although the presumption is that the perforation was into the lesser peritoneal sac posteriorly and was somewhat walled off so that a trial of conservative management may be justified. The recent literature reveals reports of good results with conservative management but the burden of proof would still appear to be with those who use it, and it is my prediction that it will not stand the test of time. During the past six months 31 perforated ulcers were repaired with 6 deaths. A survey of these revealed that all were neglected cases of well over 48 hours duration of symptoms and all but one over 50 years of age.

The decision as to the proper operative procedure is usually that of simple closure of the ulcer. Recently reports of resection at the time of operation have revealed satisfactory results and if the surgeon is competent to do a quick resection and there has been little soiling and minimal shock this may well save the patient subsequent operation for cure of symptoms.

It might be well to comment at this point, however, that sometimes when one makes a hobby of a certain operation he can get results which will not be duplicated by others.

In all emergency procedures as well as elective operations if feasible at all the exploring hand, before getting to the contaminated area, may provide the surgeon with satisfaction of

finding an asymptomatic carcinoma of the G.I. tract or pelvic, which he can care for satisfactorily as an elective procedure after the acute episode has been managed.

The postoperative management of the acute surgical abdomen has not been covered in detail since the control of electrolytes and distention is well known to all. One problem which appears to be of increasing magnitude is the transfusion-happy attitude which seems to be developing and which is having serious ramifications. The use of blood should be limited to those in whom it is a life saving procedure and use of a routine transfusion either for its tonic effect or because the surgeon is slow and the procedure long appears unjustified. Blood is a two edged sword and serious complications can be associated with its use.

Consideration of the disease entity hepatitis must bear in mind among other things the sources, the origins, and modes of transmission of the infection. We speak of two types of hepatitis. There, however, is no concrete evidence to indicate with certainty that these are different diseases, any more than one cold is different from another. Possibly the only difference may be in the mode of transmission. Homologous serum hepatitis is transmitted by injection of serum as in whole blood or any blood product. Infectious hepatitis is transmitted by fecal contamination of food and water or by direct individual contact. Homologous serum hepatitis is generally more severe and has the longer incubation period because of the size of the inoculating infection is generally so large. Infectious hepatitis generally has a shorter incubation period and a lower mortality and lower degree of morbidity. Once a hepatitis has developed the two forms cannot be differentiated by any clinical method.

In the population at large approximately 0.5 of 1 per cent of all individuals are carriers of the virus of hepatitis which may be transmitted by transfusion. The figure is determined from the incidence of post-transfusions hepatitis. It is not possible by any known method to determine whether an individual's blood or serum carries the virus of hepatitis. The National Institute of Health prescribes a routine for examination of all donors and their blood which should be closely followed. This includes careful questioning concerning recent and past infections, routine serology, temperature determination,

and chemical tests for excess blood pigments.

The incidence of infectious hepatitis is 0.02 of 1 per cent. If these figures are applied to the general Los Angeles population areas as of 1952 when a study was made, we see that on the basis of approximately 15,000 transfusions given that year there would have been about 75 cases of homologous serum hepatitis following transfusion. However, in the total Los Angeles population area of three and one half million people there would have been 700 cases of spontaneous infectious hepatitis, clinically indistinguishable from the post-transfusion variety. A history of transfusion within six months preceding development of hepatitis may presume that the donor blood was the source of the infection but cannot be considered to be direct proof. Hepatitis also may be transmitted through the medium of instruments which have been sterilized by methods such as boiling which may not destroy the virus. That hepatitis is then at the present time a possible sequel of transfusion which cannot be foretold or forestalled.

During the period of the last war the expression "a calculated risk" became a byword. The significance of this term as applied to medical procedures is something that we are prone to overlook. Although a procedure may be an imperative life saving necessity, the hazard of the calculated risk still exists. The mortality rate following blood transfusion approaches that following appendectomy or anesthesia. Obviously, then a transfusion is not an entirely benign procedure, and possible benefits should be weighed against the hazards.

In consideration of the hazards involved and bearing in mind the "calculated risk", I think we might well paraphrase another popular query of the last war and ask "Is this transfusion necessary?"

The untoward reactions associated with administration of the wrong type of blood can frequently be noticed before a substantial amount is given providing the patient is awake. The time to correct severe anemia is before the patient is anesthetized and on the operating table. Doctors and laboratory personnel are honest but not infallible and the human error cannot be entirely eliminated. It is no more possible to entirely prevent accidents with thousands and thousands of transfusions given than it is with thousands and thousands of automobile drivers.

Improved technique, improved antibiotics, improved knowledge of postoperative care and improved electrolyte control have lessened the hazards and possibly some of the challenge of surgery of the acute abdomen.

In conclusion, there is still the automobile which does not bow to antibiotics and there are antibiotic resisting strains of bacteria, so it would appear that the acute surgical abdomen like the poor, will always be with us.

## MANAGEMENT OF THE ANEMIAS DIAGNOSIS AND TREATMENT\*

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### INTRODUCTION

**B**EFORE beginning the discussion of the management of anemias it is appropriate to define the normal values. For the adult, a convenient average for packed cell volume (hematocrit) is about 45 per cent, the average hemoglobin 15 grams per cent, and the average red blood count 5 million per cubic millimeter. These three figures are easily remembered and will be used later as the basis for the calculation of the normal indices. In each case the average for the female is slightly lower than the figure given and the average for the male is slightly higher. It must also be remembered that a normal child one year of age would be expected to have a hemoglobin of around 11 grams. During the latter part of pregnancy the hemoglobin also drops to an average of about 11 grams.

The number of red cells circulating depends upon the balance between the rate of production and the rate of destruction. In other words, anemia may be produced by an inadequate manufacture of red cells or an excess loss of red cells either from hemorrhage or from increased intravascular destruction.

### DIAGNOSIS

There are many tests that may be necessary to adequately diagnose the type of anemia. For the purpose of this discussion the most commonly used tests are divided into two groups — those that can be done reliably in an office and those that must be done in a regular clinical laboratory. In Table 1 are listed the office procedures.

### OFFICE PROCEDURES

**PACKED CELL VOLUME:** The packed cell volume is the simplest and the most reliable method of diagnosing anemia. The test de-

termines what percentage of whole blood is made up of red cells. An anti-coagulant such as the proper ammonium and potassium oxalate should be used in order to avoid changes in the size of the red cells. A properly filled Wintrobe tube is spun in a centrifuge until the packing is complete. Fifteen to thirty minutes are required in a good desk model centrifuge at 2500 RPM. The length of time needed for any one centrifuge can be readily obtained by examining the Wintrobe tube at regular intervals and noting the time at which additional spinning will no longer increase the packing of the cells.

TABLE 1 Office Laboratory Procedures

1. Packed cell volume (P.C.V.)
2. Hemoglobin
3. Red blood count
4. Stained smear
5. Gastric analysis

**HEMOGLOBIN:** The accuracy of a hemoglobin determination depends upon the method used. Each doctor should acquaint himself with the accuracy of the method used in his office. The Sahli method is useful for screening but is not accurate enough for the calculation of indices. A photoelectric colorimeter determination can be done quickly and is sufficiently accurate if properly calibrated. Hemoglobin should always be expressed in grams per 100 cc. of blood rather than in terms of percentage. The percentage will vary depending upon the number of grams considered as 100 per cent.

**RED BLOOD COUNT:** The result of a red blood count is not as accurate in determining the degree of anemia as is the packed cell volume or the hemoglobin. So called accurate pipettes may be responsible for as much as half

\* Presented before the annual meeting of the Arizona Academy of General Practice, Phoenix, Arizona, February 5, 1954.

a million variation in counts. Cut-rate bargain pipettes are, of course, usually the most inaccurate.

**STAINED SMEAR:** Much information can be determined from a good well-stained smear. In addition to recognizing abnormal white cells, one accustomed to looking at smears can readily estimate the size of the red cells and their degree of saturation with hemoglobin as well as the presence of abnormal cells, such as spherocytes or sickle cells.

**GASTRIC ANALYSIS:** For the purpose of hematologic diagnosis, gastric analysis can be easily done in a doctor's office. Histamine stimulation is necessary. A simplified tubeless method (Diagnex) of determining free hydrochloric acid in the stomach now has been devised with a quinine resin. Hydrochloric acid is necessary to break the quinine away from the resin. The quinine absorbed is excreted in the urine and can readily be detected there. Gastric analysis is primarily useful in the diagnosis of pernicious anemia.

#### OTHER PROCEDURES

A regular clinical laboratory with experienced technical help is often needed for more accurate determination of the tests listed above as well as the following other special tests that cannot be done well in the ordinary physician's office.

**RETICULOCYTE COUNT:** A reticulocyte is a red cell that has just been liberated into the circulation from the bone marrow. The percentage of these cells then gives an estimate of the rapidity with which red cells are being liberated. Normally one-half to one and one-half per cent of red cells are reticulocytes.

**BONE MARROW STUDIES:** By a bone marrow study one is able to sample the factory. Blood cells must go through various stages of development. A disturbance in the production of red cells will frequently be reflected in the bone marrow findings. Considerable experience, however, is necessary to accurately interpret a bone marrow sample.

**COOMBS TEST (Antiglobulin test):** This test is for the purpose of determining if antibodies are present on the surface of red cells and especially useful in the study of acquired hemolytic anemias.

**UROBILINOGEN STUDIES:** Since urobilinogen is the end product of the breakdown of red cells the amount excreted in the urine and in the stools per day is useful in determin-

ing the rate of red cell destruction. Normally the urine should contain 0.5 to 1.5 mg. per day. The excretion of urobilinogen in the stool should be between 40 to 280 mg. per day.

Many other tests such as the Ham test, tests for cold agglutinins and increased fragility, Donath-Landsteiner test, and sickling tests are useful under special circumstances.

TABLE 2 Normal Indices

M.C.V.	= $\left( \frac{P.C.V.}{Rbc.} \times 10 \right)$	$45/5 \times 10 = 90$ c.u.
M.C.H.	= $\left( \frac{Hb.}{Rbc.} \times 10 \right)$	$15/5 \times 10 = 30$ r
M.C.H.C.	= $\left( \frac{Hb. \text{ or } M.C.H.}{P.C.V. \text{ or } M.C.V.} \right)$	$15/45 \text{ or } 30/90 = 33\%$

#### NORMAL INDICES

Table 2 indicates the method of calculating indices. By these calculations one is able to determine the average size of the red cells (M.C.V.), the average amount of hemoglobin in each cell (M.C.H.) and the average degree of saturation of the red cell with hemoglobin (M.C.H.C.). The normal average figures for packed cell volume, hemoglobin, and red count given previously are used for the basis of the calculations.

For the determination of the size of red cell (M.C.V.) the packed cell volume is divided by the red count in millions and the result multiplied by ten. The answer is expressed in cubic microns.

The amount of hemoglobin in the cell (M.C.H.) is calculated by dividing the grams of hemoglobin by the red count per million times ten. This answer is expressed in micromicrograms of hemoglobin in the average individual cell.

The mean corpuscular hemoglobin concentration (M.C.H.C.) is calculated by either dividing the hemoglobin by the packed cell volume or by dividing the M.C.H. by M.C.V. The answer is expressed in per cent and gives the percentage of the red cell that is made up of hemoglobin.

The results as illustrated in Table 2 are easy to remember and do no serious injustice to accuracy. Variations may be summarized as varying from a plus to a minus 3 in each of these values.

#### CLASSIFICATION OF ANEMIAS

There are many classifications of the anemias. One of the most practical and yet simple classification general accepted depends upon the average volume of the red cell (M.C.V.). On the basis of this classification, the red cell size

may average smaller (microcytic), larger (macrocytic), or normal (normocytic). Each type of anemia will now be discussed.

**MICROCYTIC ANEMIA:** The following represents a typical example:

P.C.V.	21%
Hemoglobin	5 grams%
Red blood count	3.0 million

In the calculation of indices the following results would be obtained:

M.C.H.	17	Gamma Gamma
M.C.V.	70	c.u.
M.C.H.C.	24%	

It should be noted that this is truly a microcytic anemia since the M.C.V. is 70 as compared with normal of almost 90. There is also considerable less amount of hemoglobin in each cell than usual, in fact, according to the M.C.H.C. the cells are 24 instead of 33 per cent saturated. This illustration is typical of iron deficiency anemia. Since there is normally no appreciable loss of iron from the body except during a pregnancy, a microcytic anemia in an adult means chronic blood loss. The successful treatment of this type of anemia depends upon discovering the source of bleeding, stopping it, and giving the patient iron. Usually the iron can be given orally as enteric coated tablets of ferrous sulphate following meals. Saccharated iron is now available for intravenous use. By this route effective amounts of iron can readily be given. Its use should be limited, however, to special circumstances since overdosage will produce hemosiderosis. Microcytic anemia may also be produced by chronic infections and is a characteristic feature of Cooley's trait.

**MACROCYTIC ANEMIA:** The following is an illustration of the values that may be obtained in a patient with a macrocytic anemia:

P.C.V.	24%
Hemoglobin	8.0 grams%
Red blood count	2.0 million

On calculating the indices the following would be obtained:

M.C.V.	120	c.u.
M.C.H.	40	Gamma Gamma
M.C.H.C.	33%	

Since the cells average 120 cubic microns in volume they are larger than normal and the anemia is classified as macrocytic. The amount of hemoglobin per cell is also greater than normal being 40 instead of 30. The saturation remains complete at 33 per cent. This blood count

is typical of pernicious anemia. Since pernicious anemia is apparently due to failure to absorb vitamin B-12, the disease can be controlled by the parenteral administration of B-12 or liver. Milder forms of the disease without neurological involvement may be maintained in relatively good hematologic remission with the oral use of a combination of B-12 and desiccated stomach. This same type of anemia is also seen in certain gastrointestinal diseases such as the diarrheas of sprue, celiac disease and streptorrhea, chronic liver disease, extensive loss of the stomach mucosa by malignancy or by the removal of a large portion of the stomach, and rarely by certain parasitic infestations of the intestinal tract. Treatment of the associated disease as well as the administration of B-12 is helpful. Folic acid may be necessary in the treatment of the macrocytic anemia associated with pregnancy. Since in acute hemolytic anemias the reticulocyte count is high, and since reticulocytes are larger than adult red cells, the M.C.V. may be elevated. Occasionally macrocytic anemia is associated with hypothyroidism.

**NORMOCYTIC ANEMIA:** The following is a typical example of a normocytic anemia:

P.C.V.	22%
Hemoglobin	7.5 grams%
Red blood count	2.5 million

The calculation of the indices reveal the following:

M.C.V.	90	c.u.
M.C.H.	30	Gamma Gamma
M.C.H.C.	33%	

This type of anemia may be produced by the depression of the marrow by drugs, chemicals or retention of nitrogenous products or by replacement of the marrow as in leukemia, multiple myeloma, extensive metastatic carcinoma of bone marrow or myelofibrosis. Occasionally it is seen in hypothyroidism. Immediately after an acute blood loss this type of anemia is present. Conditions shortening the life span of red cells (hemolytic) characteristically produce a normocytic anemia. It should be recalled that in hemolytic anemias the reticulocyte count is increased and the bone marrow is hyperplastic. Spherocytes may be detected on the smear and on testing osmotic fragility. Urobilinogen excretion is increased. A classical example of this anemia is congenital hemolytic anemia in which spectacular results are obtained by splen-

ectomy. Acute acquired hemolytic anemias may also produce this form of anemia. These may respond to cortisone or corticotropins. Splenectomy may also be useful in the treatment of the acquired hemolytic anemia. Increase destruction of blood cells is also present in some lymphomas, certain bacterial infections especially those due to *Clostridium Welchii* and certain parasites such as malaria. The successful treatment, of course, depends largely upon the treatment of the underlying disease. Sick cell anemia may be included in this group. Although the cells under certain circumstances may be unusual in shape their volume is near normal.

Very little has been said regarding the use of transfusions in the treatment of anemia. Transfusion before adequate study of the anemia as to type is rarely justified. For the prevention or treatment of shock due to acute blood loss nothing can be adequately substituted for

transfusions. Before the patient with anemia receives a blood transfusion he should be adequately studied, and if possible, treated by other means.

One word of caution should be given regarding the acceptance of the laboratory evidence for anemia at face value. Changes of blood volume must be taken into consideration in evaluating blood counts.

#### SUMMARY

The management of anemias has been reviewed with emphasis being given to accurate diagnosis before treatment is begun. Treatment should be limited to the specific substance that is needed to correct the patient's anemia.

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### TUBERCULOSIS IN THE AGED

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**W**E are living longer lives; there are progressively more and more of us; and tuberculosis remains a formidable foe. It follows that the problem of tuberculosis in the aged is becoming ever more prominent. Statistics confirming these postulations are abundant and a projection of the enlarging problem into succeeding decades can be made, assuming that no medicinal panacea changes the present balance of power between the germ and research.

The general gradual increase in anticipated longevity for the adult applies to the tuberculous patient as well as to the otherwise ill or healthy person. Also, by virtue of the infectious nature of the disease, more time for exposure means a greater incidence of disease.

Because of Public Health measures in the control of tuberculosis and the general elevation of hygienic and nutritional levels of the public, there has been a gradual trend of the infectious person to the older age group. Again, because of recent strides in the management of this disease, there are many tuberculous patients now alive but classified as chronics who might not have survived their acute infections.

The mobile nature of the citizenry of this

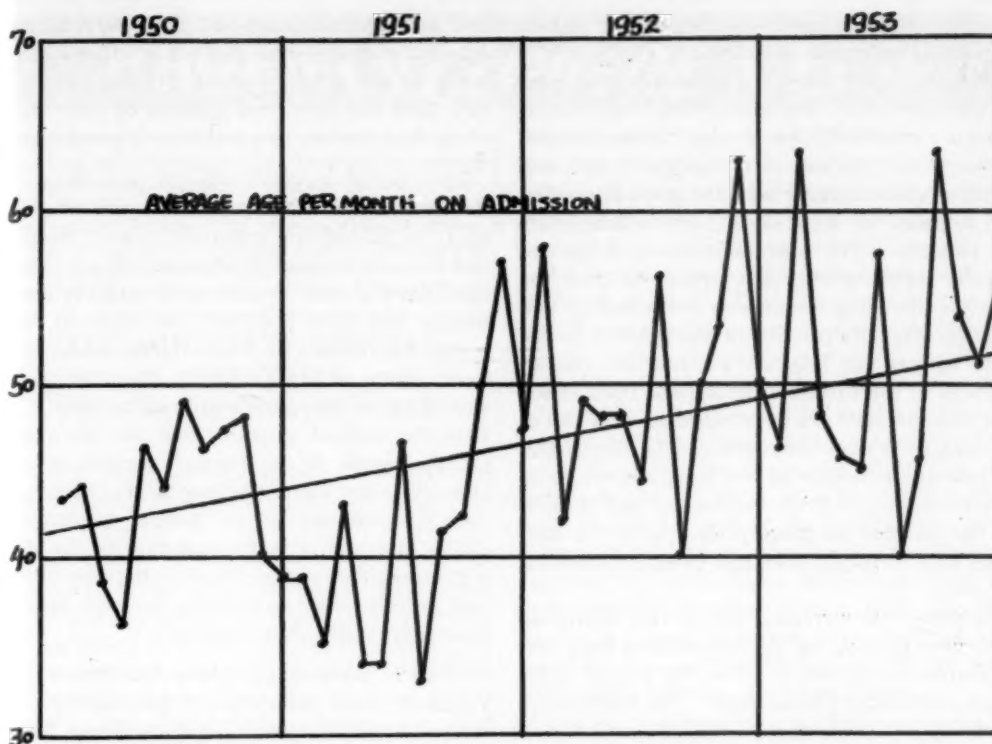
country adds its factor to this problem. The influx of a significant component of adult population to this area of the United States increases the proportion of the upper end of the general age scale. The causes for this population trend apply equally to the healthy and the sick and as a consequence, many new residents bring their illnesses with them. Some of these ills are tuberculous in origin.

#### *Four-year Statistical Review of Patients' Admission Age*

The admissions to La Vina Sanatorium over a period of four years were reviewed and the ages charted. The curve with its temporary average fluctuations, shows a steady rise in the patient-age on admission. At one point in mid-1951, there was a remission in the gradual climb of the curve and this remission reflects the findings of a younger series of patients uncovered by the Los Angeles County Tuberculosis Survey.

#### *General Principles of Treatment for the Elderly Patient*

Treatment of any kind for the elderly includes the application of principles of therapy given to the average patient plus those special precautions necessary for the aged. These special considerations consist of handling a vascular inelas-



tivity with diminished reserves of the cardiac, pulmonary and renal systems. These limitations are reflected in a lowered vital capacity, a tired and possibly abused heart, a slower metabolic rate, a lessened adaptability to stress, and occasionally senile deterioration. This means, more simply, a greater morbidity to the patient and a narrowed latitude for the physician.

When these generalizations of therapy for the aged are brought into the scope of the care of tuberculosis, the differences for the physician, the nurse, and the family become large.

First, an evaluation of the physiological age as compared with the chronological age shows marked variation in the individual response to the aging processes. This variation refutes a definite borderline beyond which certain forms of treatment are excluded in a broad plan of therapy.

Hospitalization for the older patient with tuberculosis involves special administrative obstacles. Economically, he is probably dependent upon younger members of his family or without such aid, increases the geriatric proponent of a social program of care. The patient himself, does not adapt well to any extended change in

his well established ritual of living. It has been found difficult to teach tuberculous technique to the elderly, which makes nursing or the procurement of nursing more difficult.

#### *Application of Principles of Therapy for the Aged*

Not only is the physiologically old patient less adaptable to hospitalization, but he is also less capable of tolerating some of the procedures of treatment. A vigorous program based on preventative as well as therapeutic principles, in which a large risk is balanced by an extended future free of disease, can be offered less enthusiastically to the aged than to other groups. However, the elderly also deteriorate more quickly than their younger parallels on strict adherence to a conservative regime or bed rest. Physical inactivity begets further inactivity, independence gives way to complete dependence, and the old are particularly prone to some sequelae of bed rest such as phlebotrombosis. A summary, therefore, of the limitations of therapy for the elderly toward recovery from a tuberculous infection confronts the physician by a narrow selection of a plan hemmed by a lower tolerance to active measures of surgery, a slow rate of healing if conservative measures are pursued, and a detriment of general well-being if

bed rest alone is used. A compromise within these binding factors is sought.

The controlled care in a tuberculosis hospital is unquestionably the ideal where bed-rest is used in a modified form to adapt to the requirements of eccentricities of the patient. Anti-bacterial or chemotherapy with the hope of sterilizing a lesion has its greatest forte in this group of patients. The anti-tuberculosis drugs are usually well tolerated and appear to give the same encouraging response as in the middle and younger age groups. All of the patients in the sixty or over age bracket have received chemotherapy in the tuberculosis hospital from which the previous statistics were obtained. The use of air therapy is more restricted and less rewarding in this group because of the usual chronicity of disease leading to fibrosis of lesions, and because of the lessened tolerance of the patient to minimal long term physiological changes attending its use.

Whether the increased call of the elderly tuberculous patients for the tuberculosis beds now available can be met is one of the present problems confronting phthisiology. The solution appears to lie within these alternatives:

1. Admit all infectious cases to the care of a tuberculosis hospital;

2. Adaptation and education of both the patient and his home so that his illness can be handled safely and effectively on a home-patient basis;

3. The application of a rapid and effective conservative regime while hospitalized — a method not yet realized;

4. The application of the more radical recent trends of resectional therapy which have shown increasingly rapid effective suppression of the disease in the younger patients.

#### *Surgery and the Elderly Tuberculous patient*

The aspect of presenting surgery to the elderly patient has provoked a great amount of thought with substantiated controversial pro and con factors. Phthisiologists have not themselves reached full agreement as to the position of surgery as a target in the plan of tuberculosis therapy, while at the same time surgeons are venturing further and further in daring attacks on carcinoma within the thorax. The ability of the elderly to withstand major surgery has repeatedly been discussed, (1), (2), (3), and

(4) and effective methods have been encouragingly outlined with respect to the surgical needs of the elderly patient. Others, (5) and (6), have also urged the surgeon by their study of cardiac reserve in previously injured hearts.

The use of surgical collapse procedures for the aged, in lieu of resection of a portion of the lung, is finding progressively fewer sponsors and less enthusiasm. Permanent collapse is now considered almost equally as formidable as resection and does not have the more positive results the latter can offer. Here, then, lies a basic aspect of this problem. By what guides should we offer or withhold from an elderly patient the surgical measures that are given with proven benefit to the young? Important considerations are, (1) — philosophically, how much useful future can an old patient expect, and (2) — if a safe way for resection in the aged is paved by the surgical attack on thoracic cancer, may not the same be used for the well selected resectable tuberculous lesions?

Surgical removal of tuberculous tissue in a relatively small proportion of patients with this infection, in this general area, will not eradicate the disease in a few months or even in a decade, but it will lend its undoubtable support in our cosmic effort to add tuberculosis to the list of conquered afflictions.

#### CONCLUSIONS

1. Tuberculosis remains a problem despite recent strides with chemotherapy, and the problem has both medical and social aspects.

2. Tuberculosis is an affliction of the aged as well as other age groups and because the general population is living longer, there is more tuberculosis in older patients than in previous decades.

3. Advances have been made in both surgery of tuberculosis and surgery of elderly patients. In selected patients, it is felt that the indications can be broadened for resectional treatment in the older person with pulmonary tuberculosis.

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# PHOENIX *Clinical* CLUB

The Case History in this discussion is selected from the Case Records of the Massachusetts General Hospital, and reprinted from the New England Journal of Medicine. The discussant under Differential Diagnosis is a member of the staff of the Massachusetts General Hospital. The other discussants are members of the Phoenix Clinical Club.

## MASSACHUSETTS GENERAL HOSPITAL PRESENTATION OF CASE

A thirty-four-year-old man was admitted to the hospital because of pain in the left side of his chest.

Two months before admission the patient first noted an ache in the left axilla while sweeping a floor. This ache was worse on deep breathing, coughing or sudden movement. About one month prior to admission he had a mild chill, fever with a temperature ranging from 100 to 101°F., and a mild cough productive of a small amount of whitish, mucoid sputum. This illness was short lasting, but thereafter the pain persisted and gradually became more severe but remained pleuritic. He next noted a very tender spot over a rib in the left axilla. He believed that a low-grade fever had been present intermittently. There had been no hemoptysis, hoarseness, weight loss or exposure to tuberculosis.

Physical examination showed a well nourished man in mild distress complaining of pleuritic pain in the right side of the chest. A tender soft-tissue fullness, 5 by 2 cm., was felt in the midaxilla over the left sixth rib. A soft patchy friction rub of leathery quality was heard over the left-lung base posteriorly and at the left posterior and midaxillary line. Otherwise, the chest was clear to percussion and auscultation. The remainder of the physical examination was noncontributory.

The temperature was 100°F., the pulse 80, and the respirations 20. The blood pressure was 100 systolic, 60 diastolic.

Urinalysis was negative. Examination of the blood revealed a white-cell count of 8800, with 68 per cent neutrophils, and a hemoglobin of 16 gm. The nonprotein nitrogen was 19 mg.,

the calcium 10 mg., the phosphorus 3.7 mg. the alkaline phosphatase 3.3 units, and the total protein 7.48 gm. per 100 cc., with a normal albumin-globulin ratio. The sedimentation rate was 12 mm. per hour. Roentgenograms of the chest demonstrated a destructive process in the sixth rib in the axillary line, involving the entire thickness of the rib over a distance of about 3 cm., with a soft-tissue mass both inside and outside the chest cage. There was a suggestion of increase in the fine mottled markings throughout both lung fields, most pronounced peripherally, and a small amount of fluid in the left costophrenic angle as well as some adherence of the left leaf of the diaphragm. Intravenous pyelograms showed a double renal pelvis and double ureter on the left; no other abnormality of the upper urinary tract was demonstrable. Gastrointestinal series, barium-enema examinations and films of the lumbosacral spine and pelvis showed no abnormalities.

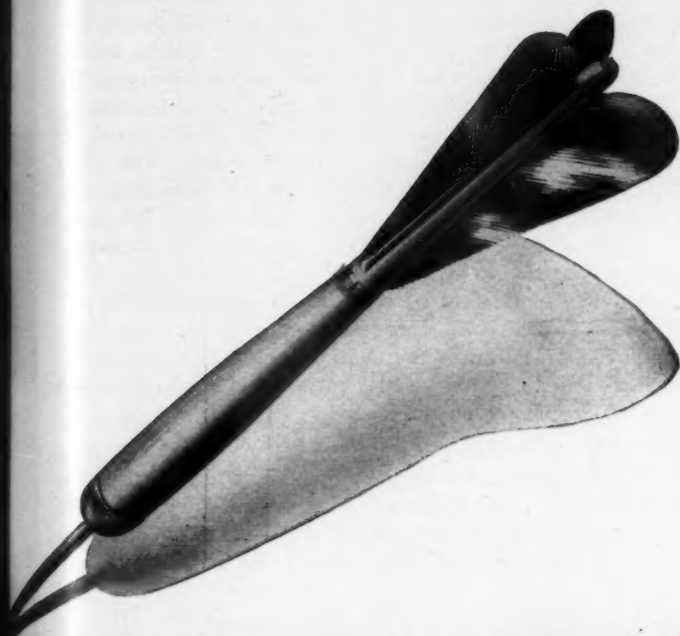
On the eleventh hospital day an operation was performed.

DR. ROBERT S. FLINN: This is a story of a 34 year old man who entered the hospital with a tender, soft tissue fullness in the mid-axilla over the left 6th rib. X-ray examination demonstrated a destructive process in the left 6th rib in the axillary line involving the entire thickness of the rib over a distance of about 3 cm. with a soft tissue mass both inside and outside the chest cage. His white count and sedimentation rate were within normal limits and all other laboratory procedures, including an alkaline phosphatase, were normal.

Because of the history and x-ray appearance, I believe that we can rule out osteomyelitis, tuberculosis and other chronic inflammatory processes.

Having disposed of chronic inflammation as a cause of this patient's condition, let us turn to consideration of tumors of the thoracic wall. According to Coley, benign and malignant tumors of the ribs, costal cartilage and sternum are uncommon if metastatic carcinoma and plasma cell myeloma are excluded. Both of these conditions result in bone destruction. Although we must consider metastatic disease as a cause for this patient's condition, there is nothing in

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- Bacillary Dysentery
- Pneumonia with or without Bacteremia
- Bronchopulmonary Infection
- Acute Pyelonephritis
- Chronic Pyelonephritis
- Mixed Bacterial Infections
- Soft Tissue Infections
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LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* Pearl River, New York

\*REG. U.S. PAT. OFF.

the history or examination to implicate any particular part of the body. In a similar way, I do not see how we can consider plasma cell myeloma since there is no mention of the presence of Bence-Jones protein in the urine, and the serum protein is within normal limits. It should be mentioned here parenthetically, however, that in only 60 per cent of patients with plasma cell myeloma, is Bence-Jones protein found in the urine. The presence of Bence-Jones protein in the urine or a total serum protein of 8.5 grams in a patient with osteolytic bone disease, a diagnosis of plasma cell myeloma is reasonably certain. If plasma cell myeloma was considered in the differential diagnosis of this patient, one wonders why x-rays of skull and long bone was not carried out. It is true that solitary plasma cell myelomata are occasionally referred to in the literature, however, the condition is so rare as to require little consideration here.

Of the remaining tumors of the thoracic wall, statistically chondroma, osteogenic sarcoma and Ewing sarcoma are the most important. Some idea of the relative frequency of sarcoma in this region may be gained from the following figures taken from Coley: Campbell found one rib case among 57 osteogenic sarcomas; Meyerding found three, rib and three sternal in 100 osteogenic sarcomas.

Central chondroma is the commonest benign form and of great importance because of its tendency in middle and late adult life to undergo chondro-sarcomatous alteration. It may arise in the rib itself or in connection with costal cartilages and occasionally in the sternum. Giant cell tumor is quite unusual in the ribs. Ewing sarcoma (endothelioma of the bone) may involve the ribs but it is exceedingly rare in the sternum. Metastatic cancer and plasma cell myeloma comprise a vast majority of destructive rib tumors. I believe that we can rule out both endothelioma of the bone and osteogenic sarcoma by the lack of characteristic x-ray findings. In the former, reactive bone is generally laid down in layers (plywood or onion skin appearance) parallel to the shaft which is not the case in osteogenic sarcoma where radiating spicules project at right angles from the cortex like the sun's rays.

The third most likely condition to consider is chondroma. These are centrally situated tumors of cartilagenous derivation, also known as chondromyxomas or enchondromas. These

growths occur in the metacarpals, metatarsals and phalanges of the hands and feet and in the ribs, femur, tibia, humerus and pelvic bones. The diagnosis from x-ray examination may be quite difficult for they can closely simulate a giant cell tumor or cyst or even an osteolytic area due to central sarcoma of low grade. According to Coley while the roentgenologist can frequently make a strong presumptive diagnosis of central chondroma on the basis of a circumscribed area of radio lucency in the end of a long bone, it is often possible to confuse the picture with that presented by bone cyst, giant cell tumor and non-osteogenic fibroma bone. He points out the necessity of exploration and microscopic diagnosis.

Still another condition which should merit a mention is eosinophilic granuloma. This peculiar solitary lesion of bone was described by Jaffe and Lichtenstein about 1940. It is apparent that there is a close relationship between eosinophilic granuloma, Letterer-Siwe disease and Hand-Schuller Christian's syndrome. It now seems reasonable to assume that these conditions represent clinical gradations of the same basic disorder. When manifested in infancy or early childhood, often in a fatal form with involvement of both skeletal and soft parts, the terms non-lipid histiocytosis or Letterer-Siwe disease is appropriate. When the disorder affects children or adults and assumes a chronic form in which the histiocytic areas undergo collagen or lipid alterations the designation of lipo granulomatosis or Hand-Schuller Christian's disease is proper. The prognosis is less grave although still uncertain on account of the damage to lungs, pituitary and heart muscles. Finding the comparatively benign form localized apparently in the bones and often in a single bone occurring in children and young adults is designated as eosinophilic granuloma. Radiation therapy, simple curettage or even spontaneous resolution serve to bring about healing of the involved areas. That this condition is not confined entirely to children and adolescents as emphasized by a recent report in the *Annals of Internal Medicine* (March, 1954) by May who describes three cases of eosinophilic granuloma of the lung with rib involvement. The ages being 40, 28 and 36 respectively.

In one of his cases the x-ray of the chest was negative except for 1.5 cm destructive lesion in the posterior part of the right 5th rib. At oper-

ation, the destructive costal lesion was excised and through the incision the lung was palpated and 1 cm. peripheral nodule was found. Only an upper lobectomy was performed because there was no evidence of disease in the rest of the lung or mediastinum. Pathological study did not confirm the original impression from the frozen section of undifferentiated carcinoma. The final tissue diagnosis was eosinophilic granuloma. The convalescence was uneventful. The second case showed a destructive lesion of the left 9th rib. Histological examination of the specimen revealed that eosinophilic granuloma. However, following the operation, the patient began to develop symptoms of shortness of breath, and cough and a right thoracotomy showed the lung to be diffusely granular.

But to return to our patient, here we have a 35 year old man with a destructive process in the 6th rib. After reviewing the possibilities, it seems to me the diagnosis rests between enchondroma and eosinophilic granuloma. Since even Coley points out, the ultimate diagnosis must rest on the microscopic study of the tissue removed by curettage, one can only hazard a guess. I, therefore, fancy the diagnosis of eosinophilic granuloma.

#### Differential Diagnosis

DR. RONALD C. SNIFFEN: In brief, this thirty-four-year-old man had acquired, without trauma, a destructive lesion in the left sixth rib accompanied by a soft-tissue mass in the region. Apparently, the process had led to pleural irritation and a small amount of fluid in the pleural cavity. Pleural pain and tenderness were the only subjective symptoms. Physical examination demonstrated a non-pulsating mass in the soft tissue over the sixth rib and confirmed the impression of pleuritis given in the history.

Obviously, the roentgenographic findings are of the utmost importance. What had the process done to the rib? Was it entirely osteolytic? What was its contour? Was there a periosteal reaction or change in the neighboring bone? Finally, were there significant collateral findings?

DR. STANLEY M. WYMAN: We see the fine rather granular mottling in the films of the chest that appears rather diffusely distributed and is unaccompanied by appreciable lymph-node enlargement. There is a tiny quantity of fluid in the left pleural cavity that is best seen posteriorly. The destructive lesion in the left

sixth rib, described in the protocol, shows no new-bone formation, periosteal reaction or ray formation. The Bucky films best demonstrate the accompanying swelling about the rib both medially and laterally. The bones are otherwise well preserved, and the spleen appears well within normal limits in size; no other lesions are seen.

DR. SNIFFEN: Is there any evidence of lymphatic involvement in the lung?

DR. WYMAN: No, I do not think there is any significant enlargement of the linear shadows in the lungs to suggest characteristic lymphatic involvement.

DR. SNIFFEN: I am overwhelmed by negative findings. The patient did not feel ill and had not lost weight; the laboratory tests were entirely negative, and x-ray examination demonstrated no abnormality except the fine mottling throughout the lung fields actually, that finding is very disturbing. In every patient's history there are at least a few worrisome interjections, which may guide one's train of thought. They may be abruptly discarded or carefully included to bolster a particular condition. From the history, trauma can be dismissed as a causative factor. One month before admission the patient had a chill with fever and a cough. I do not consider this episode important principally because of its short duration, the unexciting character of the sputum and the lack of relation to the chest pain. Yet there was a suggestion of subsequent intermittent fever, and the temperature was slightly elevated at the time of admission. I do not believe that the lesion in the rib was the result of an acute pyogenic infection; the pleural pain preceded the local tenderness; the location of the lesion is against it; there was no change in the overlying skin; and the regional subcutaneous lymph nodes were not enlarged. Furthermore, leukocytosis was absent, and the sedimentation rate was normal.

Tuberculous osteomyelitis is a possibility, but the process seemed a little rapid and painful for this disease. In attempting to draw the findings together, I cannot believe that there was disseminated tuberculosis in the lungs. Certainly, tuberculous osteomyelitis may exist without another demonstrable focus of disease or laboratory findings indicating infection. However, tuberculosis is unusual in a rib and is not entirely osteolytic, as this lesion appeared to be.

The location and x-ray appearance are against syphilis, and surely actinomycosis of a rib would be secondary to a large pulmonary lesion. From the x-ray evidence only, echinococcus disease might be considered, but the cyst usually grows more slowly and is painless. The history does not support this diagnosis, and apparently there was no eosinophilia; skin tests were not mentioned.

There was no clinical or laboratory evidence of metabolic bone disease. The serum calcium, phosphorus and alkaline phosphatase were normal, and the kidney function was unimpaired as far as it was investigated. No change was demonstrable in the rest of the skeleton.

Of the xanthomatoses of bone, I should consider seriously only eosinophilic granuloma. This condition often produces a solitary lesion in a rib of fairly abrupt onset. There is pain, tenderness and swelling, and bone destruction reaches a maximum in a few weeks. Usually, the bone is rarefied, and the shell is expanded, but may be totally destroyed.

Monostotic fibrous dysplasia is common in a rib, but the x-ray appearance is different and this patient's symptoms were too definite for that condition.

If the patient had a tumor, I believe that it must have been malignant. Having made that statement, one must decide whether the tumor was primary or metastatic. Again, the findings in the lungs come under scrutiny. Was the fine granular mottling an indication of metastatic tumor, and, if so, was it part of a generalized dissemination of tumor or was it secondary to the tumor in the rib? In a somewhat uncertain tone, I shall say that the lungs did not contain tumor and furthermore probably had nothing to do with the immediate problem. I should expect a patient with metastatic tumor in the rib, and the x-ray appearance of the lesion is consistent with this diagnosis. Yet one is not justified in making such a diagnosis without at least a clue to the location of the primary tumor. In this regard the kidneys, prostate, stomach, lungs and thyroid gland should be examined as thoroughly as is practical. The unobtrusive growth of cancer of the pancreas and difficulty in examining the region make this disease notoriously treacherous.

It is often difficult to differentiate the various malignant tumors arising in bone by any means short of microscopic examination. Even then

the pathologist sometimes resorts to masterful hedging, a skill at which he should be highly proficient and without peer, the roentgenologist excepted. Like the drowning man, one must clutch at straws. The patient's age does not help me in the least. It has influenced me in dismissing certain diagnoses, but in the end I shall disregard it.

Osteogenic sarcoma is uncommon in a rib, and the appearance of the x-ray film in the case under discussion is not consistent with this tumor in its usual form. I should be happier if I could forget the osteolytic sarcoma that does not produce ray formations.

Chondrosarcoma may destroy bone in this fashion. In early lesions the tumor is often situated outside the bone proper, and the marrow is not involved. It may have a lobulated contour, and frequently the histology is not uniform and calcification takes place so that blotchy areas of increased density are seen in the x-ray film. Chondrosarcoma may arise in a chondroma, but the patient had not noticed swelling in the rib before the rapid development of the present lesion.

Lymphoma cannot be dismissed despite the fact that this was a solitary lesion. Conceivably, there was diffuse pulmonary involvement, but the possibility seems highly unlikely. There was no apparent lymph-node enlargement or splenomegaly and no aberration in the blood count in the form of either leukemia or anemia. Solitary lesions of bone in lymphoma are distinctly uncommon and usually arise as reticulum-cell sarcoma in a long bone of an extremity.

Myeloma is common in the ribs and does not stimulate new-bone formation; pain may be a feature of the disease. In general, it is unusual for myeloma to extend beyond the cortex, and most frequently the bone is diffusely mottled and the break is not clean, but develops through a widened and rarefied area. Myeloma seldom grows to this size without appearing in other bones. Furthermore, the patient was young for the disease. Bence-Jones proteinuria was not mentioned; there was no indication of renal disease, and the serum protein was not elevated.

It seems very likely to me that this patient had Ewing's tumor, and the pain, swelling and slight elevation of temperature are consistent with this diagnosis. Yet the x-ray appearance of the lesion is not characteristic. The tumor had destroyed the cortex and classically this event

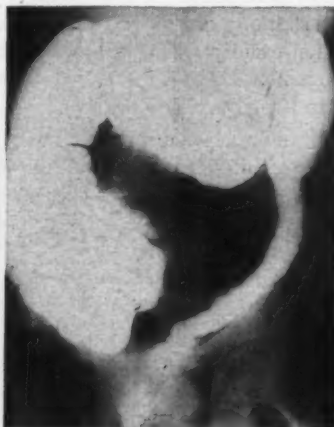
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Ulcerative Colitis



Atonic Colon

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Once the habit of constipation has been established, due to any of a large number of causes, it becomes a major problem. Self-medication with irritant or chemical laxatives, or repeated enemas, usually causes a decreased, sluggish defecation reflex and may result in its complete loss.

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It is indicated in chronic constipation of various types—including distal colon stasis of the

"irritable colon" syndrome, the atonic colon following abdominal operations, repressions of defecation after anorectal surgery and in special conditions such as the management of a permanent ileostomy. Metamucil is the highly refined muciloid of *Plantago ovata* (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

The average adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice, followed by an additional glass of fluid if indicated.

Metamucil is supplied in containers of 4, 8 and 16 ounces. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

SEARLE

stimulates the production of layers of periosteal new bone formation. Unfortunately, there are many exceptions to this textbook picture. Ewing tumor usually occurs at an earlier age and is most common in the shaft of the long tubular bones and in the pelvic bones.

In full anticipation of a curve ball or a looper crossing my blind spot, I shall single out two conditions as the best possibilities — namely, Ewing's tumor and eosinophilic granuloma. Admittedly the patient was rather old for either of these conditions. Nevertheless, my first choice is eosinophilic granuloma because the glove seems to fit; in brief, a rapidly developing solitary lesion in a rib accompanied by pain, tenderness, slight fever and a mass that on x-ray examination is seen as an osteolytic lesion with soft-tissue swelling.

#### Clinical Diagnosis

Inflammatory tumor of sixth rib.

#### Dr. Sniffen's Diagnosis

Eosinophilic granuloma of rib.

#### Anatomical Diagnosis

Eosinophilic granuloma of rib.

#### Pathological Discussion

Dr. David Kahn: Dr. Sniffen seems to have had no trouble in knocking our best pitch clear out of the park. Preoperatively there was no great unanimity of opinion about the diagnosis; primary malignant bone tumor, metastatic cancer and inflammatory process were considered as possibility, with the last condition considered the most likely. However, because primary malignant bone tumor was still a strong possibility, the chest-wall tumor was resected en bloc, including the entire sixth rib along with short segments of the fifth and seventh ribs adjacent to the tumor; when the chest cavity was open, it was seen that the pleura was covered with fibrin and gave evidence of inflammation, although the underlying lung substance appeared to be soft and showed no abnormality. When we examined the specimen in the laboratory we found that there was a mass measuring 5.5 by 2 by 1.5 cm. occupying and replacing the midportion of the sixth rib. A thin, expanded remainder of cortical bone of the rib surrounded the anterior, superior and inferior portions of this enlargement; posteriorly, there was an area in which cortex could not be made out, and the mass extended posteriorly and was adherent to a small piece of attached parietal pleura. The tumor was soft and somewhat mushy and was

dark yellow. There was abnormal mobility of the rib at the involved region. The adjacent ribs were not remarkable. Histologically, a large portion of the mass was necrotic; however, there were well preserved areas that showed typical eosinophilic granuloma. In these areas there were broad bands of mature eosinophils, with small focal areas of mononuclear phagocytes or histiocytes scattered throughout. Almost all the cancellous bone of the rib in the involved area was replaced. The granuloma extended to, but not through, the parietal pleura.

Four months after operation, the patient was asymptomatic; the physical examination was negative, and the radiologic changes in the lung parenchyma were still present. I suppose we can assume that the pleural friction rub and small amount of pleural fluid were secondary to irritation of the parietal pleura by the tumor mass.

#### Addendum

DR. J. GORDON SCANNELL: There is little to add to Dr. Sniffen's excellent analysis of the problem. Those of us who were charged with the clinical management of this patient took refuge in the term "inflammatory tumor". Believing that the best way to establish the diagnosis was by radical-excision biopsy, we proceeded on the basis that tumor had not been excluded. One can employ this radical approach in an expendable bone such as rib and yet produce surprisingly little functional damage to the chest wall. As surgeons we have been impressed by the dismal course of patients in whom a rib tumor is actually cut into at the time of its removal, especially if malignant.

Dr. R. S. Shaw and I have recently reviewed the experience at this hospital with solitary eosinophilic granuloma of rib. This represents the fourth such case. The association of severe pain disproportionate to the radiologic findings was strikingly constant. The patients were all of the young-adult age group. All did well after excision of the involved rib or liberal portions thereof.

I am chagrined that we did not obtain a biopsy of the lung at the time of rib resection. The pleural surface showed considerable fibrinous thickening, as Dr. Kahn has stated.

---

64th Annual Meeting, Arizona Medical Association — May 4-7, 1955. Headquarters El Conquistador Hotel, Tucson, Arizona.

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## THE *President's* PAGE

### STATE OF ARIZONA — TWENTY-SECOND LEGISLATURE FIRST REGULAR SESSION

#### Measures Introduced of Interest to Medical Profession

H. B. 14 GROSS INCOME TAX  
IMPOSES A TAX UPON THE GROSS RECEIPTS FROM WHATEVER SOURCE, OF ALL PERSONS, WITH, SPECIFIED RATES.

H. B. 26 NATUROPATHY  
PROVIDES THAT THERE SHALL BE 5 MEMBERS (NOW 3) ON THE NATUROPATHIC BOARD AND DEFINES AND PROVIDES FOR THE REGULATION OF THE PRACTICE OF NATUROPATHY.

H. B. 28 SALES TAX  
EXEMPTS FOOD PRODUCTS AND MEDICINE FROM SALES TAX.  
DEFINES FOOD PRODUCTS.

H. B. 31 MIDWIVES  
PROVIDES FOR THE LICENSING OF MIDWIVES SUBJECT TO RULES, REGULATIONS AND QUALIFICATIONS WHICH SHALL BE ESTABLISHED BY THE BOARD OF HEALTH.

. . .

S. B. 18 PUBLIC HEALTH  
MAKES TECHNICAL CHANGES IN THE LAW TO MAKE IT LEGALLY POSSIBLE TO ESTABLISH AND OPERATE COOPERATIVE PUBLIC HEALTH DISTRICTS.

S. B. 20 TUBERCULOSIS  
PROVIDES FOR THE COMPULSORY ISOLATION OF ALL INFECTIOUS CASES OF TUBERCULOSIS AND PROVIDES THAT THE COUNTIES AND STATE SHALL PAY COST OF SUCH ISOLATION AND TREATMENT WHEN PATIENT IS NOT FINANCIALLY ABLE TO DO SO. GIVES BROAD POWERS TO STATE DEPARTMENT OF HEALTH OVER TUBERCULAR INDIVIDUALS. APPROPRIATES \$250,000 FOR PURPOSES OF THIS ACT. EMERGENCY.

S. B. 23 PUBLIC HEALTH  
PROVIDES THAT THE ANNUAL SALARY OF THE COMMISSIONER OF THE STATE DEPARTMENT OF PUBLIC HEALTH SHALL NOT BE LESS THAN \$10,000 PER YEAR (NOW MAY NOT BE MORE THAN \$10,000).

THESE AND OTHER IMPORTANT BILLS ARE BEING REVIEWED BY YOUR LEGISLATION COMMITTEE. IF YOU HAVE ANY QUESTIONS OR SUGGESTIONS TO OFFER, CONTACT YOUR CHAIRMAN, DOCTOR MILLARD JEFFREY, 411 SECURITY BUILDING, PHOENIX.

# Editorial

## ARIZONA MEDICINE

Journal of

ARIZONA MEDICAL ASSOCIATION, INC.

VOL. 12 FEBRUARY, 1955 NO. 2

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The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Certain general rules must be followed, however, and the Editor therefore respectfully submits the following suggestions to authors and contributors:

1. Follow the general rules of good English, especially with regard to construction, diction, spelling, and punctuation.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. (See MEDICAL WRITING by Morris Fishbein).
3. Be brief, even while being thorough and complete. Avoid unnecessary words. Try to limit the article to 1500 words.
4. Read and re-read the manuscript several times to correct it, especially for spelling and punctuation.
5. Submit manuscript typewritten and double-spaced.
6. Articles for publication should have been read before a controversial body, e.g., a hospital staff meeting, or a county medical society meeting.

The Editor is always ready, willing, and happy to help in any way possible.

### CANCER SEMINAR

COMPLIMENTS and thanks are to be extended to the Arizona Division of the American Cancer Society in conjunction with the Arizona Medical Association for the presentation of the Third Annual Cancer Seminar at Paradise Inn, January 13-15, 1955. This was an excellent meeting. The speakers were well chosen; their discussions were illuminating and interesting. Presentations of this quality will do much to

desiminate knowledge and interest in this major problem — Cancer.

It seems appropriate to encourage Arizona Chapters of the American College of Surgeons or of Physicians to have Seminars in this area. Good participants are obtainable without undue difficulty or expense. We would strongly encourage this step.

—D.W.N.

## THE SIXTY-FOURTH ANNUAL MEETING

Arizona  
Medical  
Association, Inc.

May 4-7, 1955  
Tucson, Arizona

Headquarters  
El Conquistador Hotel

# TOPICS OF *Current Medical* INTEREST

## RX., DX., AND DRS.

By Guillermo Osler, M.D.

**T**HE biggest medical news, the biggest medical gamble, and the greatest hope in POLIOMYELITIS may be known by the time this item is published. Is DR. SALK'S VACCINE a success? He is hopeful. Dr. Francis is starting to analyze the data, using a heretofore confidential 'key'. The National Foundation is confident and hopeful, but on a limb, since it had to place the costly order for 1955 without complete data on 1954 . . . It is possible that booster doses may be necessary for the best effect, but some studies show a longer persistence of antibodies than had been expected . . . Here's hoping!

This paragraph is **NOT FOR PEOPLE OVER AGE 60** unless they are perfectly adjusted . . . W. H. Masters of St. Louis describes people in whom gonadal function ceases at that age as the "neutral gender". Says he to the American Geriatrics Society, "During our sixties we are essentially intact from a humoral point of view, and perfectly capable of functioning as efficiently as younger persons, with the exception that **WE ARE ESSENTIALLY CASTRATES**". . . WE", he says, and he is listed in the A.M.A. directory as being born in 1915! . . . He favors the initiation of replacement therapy at the onset of climacteric or menopause, not waiting to "reclaim". He uses a ratio of 1 to 20 of estrogen and androgen.

The male climacteric may be so vague that TESTOSTERONE is of no great or frequent use, but the drug is being used in larger amounts for the female menopause, for protection from breast metastases, etc. . . . The side effects, such as masculinization, are expected. The occurrence of LIVER DAMAGE (with jaundice) has been noted, and should be given another mention. Kinsell described it in 1948, and Almaden and Ross reported it a year ago in the Annals of Int. Med. . . . The mode of action of (methyl) testosterone is not certain. It results in an increased urinary excretion of 17-ketosteroids. It causes a creatinuria. It may be due to an intermediary product of the drug, but it can happen.

Here is another comment on **BLACK WIDOW SPIDER BITES**, linked with the name of a versatile physicians. It is more fun that way. . . . Dr. Emil Bogen is a famous bacteriologist, chemotherapy researcher, amazing statistician, etc. One of his side interests is poisoning by the lactodectrus mactans, and he has told the American Association for the Advancement of Science that he

has treated 200 cases in 30 years. Spider bites poison thousands every year in the U.S., and most of the spiders are black widows. About five per cent of the bites are fatal. . . . Prevention by spraying has only recently become effective, and lindane or chlordane in kerosene works well . . . Antiserums are effective in preventing death and controlling the agonizing pain, but calcium gluconate is not only more available but more dramatic.

Medical trade-journals can be used as a guide to the drugs which are 'hottest' at the moment . . . A recent issue of 'Modern Medicine' had fifteen advertisements for various RAUWOLFIA-RESERPINE derivatives. Ten of the fifteen ads were by two aggressive companies with (natcheryly) the 'best' products.

Arizona **SHOULD** be kept free of ragweed and many other plants with allergenic pollen. The relatively pollen-free air should be preserved . . . It can be, since most of the plants grow along the roadsides, and since there are now plenty of materials which act as WEEDKILLERS, or as the more modern 'SOIL STERILANTS' . . . 24-D (or 2,4-dichlorophenoxyacetic acid) is the best herbicide for broad-leaved plants, and works by growth regulation . . . Arsenic-containing solutions are widely useful against a wide variety of grasses and plants . . . Chlorates, plus borates to eliminate the fire-hazard, are similarly effective in solution, or as the dry chemical . . . The highway department will consult on treatment of private projects, and can tell you where to get the materials and when to use them.

The uncertainty which most of us have concerning the RELIGIOUS IMPLICATIONS OF NECROPSY have been cleared by Tweeddale in MINNESOTA MEDICINE . . . The physician must be armed with correct knowledge and convincing arguments if he is to secure permission. . . . Necropsy is fully accepted by the Catholic Church if done with proper respect and safeguards. (They are against cremation) . . . The Orthodox and conservative branches of the Jewish Church are generally opposed to necropsy. The Reform or Liberal faction of the Jewish Church are in favor of necropsy . . . The Christian Science Church is against necropsy except when a member "shall decease suddenly, without previous injury or illness, and the cause thereof be unknown, an autopsy shall be made by qualified experts" . . .



THE HOSPITAL BENEFIT

# Bulletin

Special

Published Bi-Monthly by Hospital Benefit Assurance, First Street at Willetta, Phoenix

February, 1955

## Question Quiz

Do you know the answers?

**Q. Why is it important for a policyholder to have a hospital plan that gives the Right to Renew?**

**A.** Let's assume the policyholder pays premiums monthly. Technically, the policy is renewed once a month. If the policyholder does not have the Right to Renew, the company can refuse renewal by refusing to accept the premium payment, thus depriving the policyholder of any further benefits. This would work a particular hardship on a person developing a recurring illness requiring repeated hospitalization, as he would be unable, because of his recurring condition, to seek coverage from another company for that condition.

**Q. Does the HBA Surgical Plan pay benefits for home calls or office calls for treatment of accidental injuries?**

**A.** Yes. HBA surgical schedules provide for treatment of accidental injuries anywhere, provided such treatment is administered within 24 hours after the accident. The HBA does not, however, pay for medical treatment of illness or for non-accident treatment or surgery outside a licensed hospital.

**Q. Is there any way I can help HBA speed the payment of my bills?**

**A.** Yes. Send us the filled-in billing form as promptly as you can. Once we receive a bill, we try to send the check within three to five days. All too often, payment is held up for weeks while the HBA Benefit Department waits for the doctor's office to make out and send us his bill. On your bill, tell us the Membership Number of the patient (on the Membership Card); the date and nature of the accident; and what treatment you gave and your fee for that treatment.

Tell your patients . . .

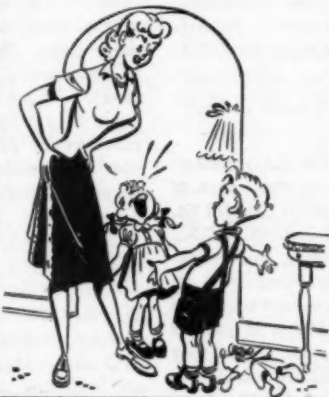
## SURGERY FOR ILLNESS MUST BE IN HOSPITAL

"Let's just take those tonsils out right here in the office!"

Words like these, Doctor, may deprive patients of HBA Surgical Benefits without their fully realizing it. HBA does not and never has paid for operations for illness performed anywhere except in a licensed hospital. This provision is clearly set forth in the Hospital Policy and in the folder.

Most HBA patients are pretty well aware of their benefits. But, in the excitement of an impending tonsillectomy or other operation, they may forget some of the provisions of their Hospital Policy.

So, you'll be doing your HBA patients a favor by reminding them that surgical treatment for illness may not be performed outside a licensed hospital if Surgical Benefits are to be paid.



"It was just a little horseplay . . . Sis bit me and I kicked her!"

Following is an excerpt from an article in the bi-monthly BULLETIN mailed to HBA policyholders explaining, briefly, how to use their Surgical Plan benefits. It will give you a pretty good idea of when your HBA patients are and are not eligible for Surgical Benefits:

### SURGICAL PLAN BENEFITS

**A. For a scheduled operation in a hospital:**

You will receive benefits for surgeon's and anesthetist's fees for illness when surgery is performed providing the operation is performed in a hospital.

**B. For emergency treatment or surgery not in a hospital:**

Surgical benefits will be paid for emergency first aid or surgery performed anywhere, if it is the result of an accident and within 24 hours after the accident. Surgical benefits are not payable for calls to doctor's office or home calls by doctor unless for treatment of accident as stated above.

### WHY THE RIGHT TO RENEW?

You undoubtedly have had patients with hospital insurance who have developed a chronic illness or suffered a recurring injury, only to have their protection taken away by the company after payment of the first hospital bill. A high percentage — 92%, in fact — of hospital policies are renewable at the option of the company only.

This calamity can be avoided by enrollment in a hospital plan that cannot be cancelled by the company and is renewable at the

option of the policyholder. These policies are placed in the general category of "Non-Cancellable and Guaranteed Renewable."

In plans of this type — such as the HBA plans which are Guaranteed Renewable to age 65 and Non-Cancellable — the company must continue the protection as long as the policy holder has the right to renew.

The major Protestant Churches have no writings or attitudes against necropsy, and accept it from the religious standpoint.

Another report on therapy for TIC DOULOUREUX combines some common plus unusual ingredients . . . First is the number of cases — 16. No one ever seems to have more . . . Second is the drug, Stilbamidine, which is now being tried for a great variety of ills. It is given I-V for 14 days . . . Third is the effect, said to be "relief of the symptoms for the period of observation" . . . Finally, the complication, "late chronic neuropathy". Progressive sensory changes of paraesthesia, hypalgesia, and anaesthesia, (evoked specifically for this condition), are usually confined to the face, and are noted 2 to 5 months after therapy! . . . This would seem to be the 'hard way', similar to knocking out the vestibular function with overdoses of streptomycin.

People say some awful things about HOLLYWOOD, and some of them may be true. Some of them may be based on misinterpretation, however, and herewith is an example to show why it takes only a little imagination if you have a basic idea — In yesterday's mail was an advertisement from Krupnick's Rentals and Sales' company, Hollywood. The top of the letter says — "HEAD-QUARTERS FOR ALL YOUR NEEDS IN PARTY AND SICKROOM SUPPLIES" . . . You don't have to be crazy or mixed-up to be confused by THAT one!

The columnist and editor, Dr. W.C.A., probes into the problem which is so dear to the heart of those who believe that BODY AND MENTAL FUNCTIONS are strictly the result of CHEMICAL REACTIONS . . . Hormones, enzymes, gas transport, nerve and muscle reactions, etc., are all pretty well labelled now in that respect . . . The foetus will be a feeble-minded child if it cannot get rid of phenylpyruvic acid. The hereditary inability to excrete porphyrins usually results in a neurotic state. Sedatives such as alcohol, barbiturates, et al., cause insane-type actions. A woman with too much estrogen present during her 'lunar' menstrual periods may then be a different personality . . . Experimental fish, and even humans, have developed 'schizophrenic' pattern when given small amounts of a drug called LSD 25 (lysergic acid diethylamide) . . . It takes only a small amount of imagination to believe that Scrooge or Dr. Jekyll had a chemical alibi or that we can plan on changing personalities in the near future.

The word 'sunshine' reminds one of HELIOTHERAPY, which reminds one of the Tucson Medical Center, because that was once the 'Desert Sanitarium', because that was where they had the best facilities on this continent for studying sun irradiation . . . (The way we heard the story, Dr. Jerry Metzger had the idea for such a place

and went abroad to study the subject with Rollier in Switzerland. When he got back someone else had obtained the money and built the place) . . . This in turn reminds one to mention the first large recent series of bone and joint TB in children, reported by Modena of Vienna. An old-time series of 363 children treated with heliotherapy and general measures has been compared with 115 children treated with streptomycin and PAS. To be very, very brief, the chemotherapy is better, but prolonged bedrest and supportive measures are still required. . . . Wilkinson of London, England, has treated a smaller series with chemotherapy. Allowing for possible unsatisfactory dosage, and duration, he thinks the differences from the pre-drug are not great, due to poor penetration into necrotic bone areas, through an endarteritis. The reliance on drugs alone may give precarious results.

We heard some HOT-STOVE PHILOSOPHY one recent Saturday night as three docs gratefully clinked the ice in their classes of soda pop. One had just passed his State Board exams, and he moaned, "That's it! That's the last! I've been passing exams ever since I got out of school. I've had it!" . . . One of his pals raised an eyebrow. "Oh no you're not through! You'll be taking your American Board next, and probably more later. When you quit you're dead, one way or another!" . . . The second pal nodded in agreement. "Sure. And that isn't the only way you have to get by. You have to sell yourself to almost every new patient. Very few are sold on you by someone else. With some you have to prove it all over, every six months!"

An index of how 'dirty' we are or, more specifically, how far our hospitals are from being aseptic, is the number of RESISTANT STRAINS OF BACTERIA present in throats and infected wounds in hospitals . . . Howe tells of the causes and implications in a fine New England Journal of Medicine report. Staph. aureus is the chief bacterial offender. Penicillin is the antibiotic to which most strains are resistant, though general use of the new drugs is reflected in a high rise of resistant strains in personnel and patients . . . Most seriously, the incidence of major and minor wound infections in his hospital has increased steplike yearly for five years, from 1.09 to 3.98 per cent . . . The solution is to move at once to greater care and asepsis in surgical procedures. Other cures can come later, perhaps.

This brief story has to do with ALCOHOLISM, and is therefore remotely medical (though alcoholism should not be a subject for jokes) . . . A dignified woman went to a cocktail party and had a stronger drink than she was used to having. On being asked how she felt, she considered the matter and brightly replied, "I feel more like I do now than I did when I came."

# Organization PAGE

## CIVICS

Norman A. Ross, M.D., Phoenix, Arizona

The Health Insurance Council, James R. Williams, Vice Chairman, 208 South LaSalle Street, Chicago 4, Illinois:

**THE HEALTH INSURANCE STORY:** Publication of the first comprehensive statement of policy, purpose, and practice by the insurance companies which provide health insurance is announced by the Health Insurance Council, a confederation of the nine insurance trade associations whose insurance company members now collectively account for more than seven-eighths of the total accident and health business in the United States.

Entitled "The Health Insurance Story," this new booklet was in preparation for more than two years. It represents an effort by the council to provide physicians, hospital administrators, and others with a clear and useful explanation of the insurance company point of view about health insurance.

Note: We have previously referred to this booklet and recommended it to the physician. Portions present subject matter of value to the office secretary as well.

\* \* \*

You have been advised on this page of the percentage of money that remains in your locality, that which goes to the state, and that which is sent to the national organization of many volunteer agencies. You have been told the part of the dollar that is expended on research; and the percentage that is spent on administration at all levels. You have been advised of the number of agencies at a national and international level that spend our volunteer dollar as opposed to the number of government (welfare) agencies.

We are writing several of our contributors, our contributors are limited to volunteer agencies, and asking the following question: "How does my volunteer dollar affect me personally, how has it affected my patients in the year 1954? How will it affect us in 1955? We live in many sized towns and every county.

This should be a stickler for many of these agencies' object is an unknown disease or con-

dition. How can they explain money spent for research unless the disease was found or a treatment invented in the year 1954?

Other agencies' objects are diseases that are infectious and communicable and control of these calls for police action by the health officers of the various political subdivisions. How can this agency prove its effect on health officers?

Other of these agencies' objects are the product of low living standards and spread through an uneducated public. How can education at the early grade levels be shown to affect the medical profession personally?

Other agencies' objectives point toward rehabilitation for the major portion of their program. Such agencies may have scored very low last year in our practices. Can these agencies score high for 1955 if an informal medical profession knows the services that are available?

Maybe locally, in your town and country, nothing has been done except to bank the money or send it to the state or national organization (if such is the case you have a gripe — you could better spend it yourselves).

We anticipate lengthy letters from our contributors and will follow our usual custom of not quoting "in toto" but lift out what we consider to be the pertinent matter.

\* \* \*

**A PLATFORM ON THIS PAGE IN THE AUGUST, 1954 ISSUE. WE REFER TO ONE SECTION OF A PLATFORM OF A CANDIDATE FOR THE OFFICE OF ARIZONA STATE SUPERINTENDENT OF PUBLIC INSTRUCTION.**

The new State Superintendent of Public Instruction has publicly called for committee activity between his department of state government and the State Health Department.

Another section of that same platform dealt with safety education. In this state, driver education and all phases of motor vehicle operation is assigned to the State Highway Department. This is unique in the United States. The writer is watching to see how the Superintendent

of Public Instruction will arrange to enter this field of activity.

Educators everywhere are programing toward a department or section of health, safety, and physical education. The Phoenix Union High School and College System has already taken steps in this direction. The move of the State Superintendent of Public Instruction aimed at correlating his department activity with the Health Department is the beginning of such a program at the state level and may be the means of real progress in the elementary, the high schools, and even at a college level.

\* \* \*

#### ARIZONA TUBERCULOSIS AND HEALTH ASSOCIATION, 111 East Willetta, Phoenix, Arizona.

Educational efforts of the Arizona Tuberculosis and Health Association and its local affiliates are being linked with those of the Arizona Medical Association to secure passage by the 22nd Legislature of more adequate measures to control tuberculosis in Arizona. Millard E. Jeffrey, M.D., Phoenix is chairman of the Legislative Committee for both Associations.

An increase in the number of contributors to the Tuberculosis Associations' 1954 Christmas Seal Sale is evidence of citizen interest in doing more about Arizona's No. 1 public health problem. A recent release by the National Tuberculosis incidence and deaths in the United States shows Arizona has made little or no progress in either category in comparison to neighboring states or the United States as a whole. The rate of newly reported active and probably active cases in Arizona was 163.2 for 1953 while the average for continental United States was 52.6 and the death rate in Arizona was 29.5 as compared to 12.3 for the country as a whole. Translate these cold figures into hard cold facts that Arizona had 1518 reported active cases of tuberculosis in 1953. Aside from the personal costs and suffering of the patient and his family, this represents a staggering loss of man-hours work, diminished buying power and consequent economic loss.

Other states have had this problem and faced up to it. The proposed Tuberculosis Control Act for 1955 has been prepared to apply proven methods to reduce the tuberculosis problem in Arizona. Let's work together for its passage.

\* \* \*

UNITED CEREBRAL PALSY ASSOCIATION

OF CENTRAL ARIZONA, INC., 718 Security Building, Phoenix, Arizona.

The United Cerebral Palsy Association of Arizona is completing plans for the establishment of a Sheltered Work-Shop type of activity. This will employ the Cerebral Palsy handicapped in the bottling of cosmetics to be distributed in each community throughout the state. The Cerebral Palsy patient will find this a source of employment as it will be sold on a cooperative partnership basis.

Patrick C. Downey is the president of the Arizona group.

The Central Arizona section, Fred N. Porter, Jr., recently elected president, is active in this new work venture.

\* \* \*

A representative of the Luke-Greenway Post No. 1 American Legion, here in Phoenix suggested that inasmuch as the writer had given up exercise as such personally, that he should actively participate by proxy else the ageing process would be so rapid as to be dangerous. His prescription was that of buying a Junior League ball player, that is paying for the boy's expenses for the 1955 season in the amount of \$18.69.

No doubt the Legion Post in your town will cut you in on this deal.

Phoenix physicians contact Bill Brock, Commissioner, Luke-Greenway Post Baseball Committee, 364 North 7th Ave., Phoenix, Arizona.

#### E.E.N.T. PHYSICIAN 41

Board Eligible Ophthalmology

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## Book REVIEWS

HANDBOOK OF MEDICAL TREATMENT, Fourth Edition; Lange Medical Publications, P. O. Box 1215, Los Altos, California; 1954; Price \$3.00.

**T**HIS little book is a very excellent and up-to-date compilation of a surprisingly large amount of medical information. It is as if the "meat" of all medical school lectures and subjects taught in medical school had been systematically arranged, abbreviated, tabulated, and indexed, and placed in one book for reference. It is doubtful if there is another book which contains all of this information in readily accessible form and still is small enough to be carried in the coat pocket. It is the answer to the medical student's prayer, and every practicing physician will find it a convenient source for frequent reference and find it well worth the small space it will occupy on his desk. Not only will he find the simpler or more elementary medical facts given, such as for instance, illustrations of the various bed positions together with their indications, but he will find also the more complex medical subjects presented clearly and in quickly assimilated form. For example, the discussion of the electrolytic system of the body is excellent. We feel certain that almost every physician who sees this book will want to keep it for his library.

### NATIONAL HOSPITAL WEEK

**E**ACH year the nation sets aside one week in which to become better acquainted with its hospitals. National Hospital Week in 1955 will be May 8-14. During this week the attention of the American public is focused on our hospitals, in which one out of every eight of us receives care each year. The theme of National Hospital Week in 1955 will be "Your Hospital . . . A Tradition of Service."

National Hospital Week is sponsored annually by the American Hospital Association. Celebration of a National Hospital Day began in 1921 and was expanded to a week in 1953. National Hospital Week is traditionally built around the May 12 birthday of Florence Nightingale, the famous nurse crusader of the Crimean War, whose pioneer service led to the improvement of hospital care in both England and America.

### BOARD OF MEDICAL EXAMINERS STATE OF ARIZONA

411 Security Building, Phoenix, Arizona

The Board of Medical Examiners of the State of Arizona at a regular meeting held Saturday, January 15, 1955 issued certificates to practice medicine and surgery in this State to the following doctors of medicine:

BAGBY, GARLICK H., Copper Queen Hospital, Bisbee, Arizona.

CHAFFIN, W. T. CADMAN, 129 E. Fifth, Benson, Arizona.

CURRIN, JOHN F., 1301 N. Beaver St., Flagstaff, Arizona.

DOLESE, DAVID B., Sage Memorial Hosp., Ganado, Arizona.

EBERLING, ERNEST W., 110 S. Scott, Tucson, Arizona.

FARABEE, CHARLES R., Broadmoor Med. Center, 209 S. Tucson Blvd., Tucson, Ariz.

FLINT, CHARLES HOUSE, Hart, Michigan.

GOFF, FRED L., Copper Queen Hosp., Box 388, Bisbee, Arizona.

HOSTETTLER, DAVID P., Ganado Mission, Ganado, Arizona.

JOHNSON, ARTELL E., 34 N. Macdonald, Mesa, Arizona.

KENT, GEORGE B., JR., 550 W. Thomas Rd. Phoenix, Arizona.

McGAREY, WILLIAM A., 4320 E. Thomas Rd., Phoenix, Arizona.

ROWLEY, DEAN ANDERSON, 202 Westminister Ave., Salt Lake City, Utah.

SAGE, CLAUDINE N., 444 Mission, Apt. 7, S. Pasadena, Calif.

SMITH, HUGH H., 3134 Via Palos Verdes, Tucson, Arizona.

TRUE, DONNA LEA HAMMER, 1690 Milwaukee, Denver, Colorado.

WARNER, ARTHUR L., Crown Point, New Mexico.

*Attention Doctors Keep your 1955 Medical Directory up-to-date. Similar lists will be published quarterly following each meeting of the Board of Medical Examiners. Tear out this listing and keep it in your Directory Booklet.*

## *Notes from the* EDITORS' PEN

### **SPECIAL REGISTRANTS FOR ARMED FORCES**

Physical examination of physicians up to age 37 is being requested.

A call for 1275 physicians to be delivered in March, 1955 has been placed by the Selective Service System, and to meet the call it is necessary that Priority I, all ages; Priority II, without restriction as to months of service; and Priority III born on or after January 1, 1917 be used. Every effort is being made to get available for service all those Priority II young registrants born after August 30, 1922 in this call to protect men of that priority who are older.

### **MEDICAL SERVICE PLANS**

The AMA Board of Trustees announced the appointment of a 13-member Commission under the chairmanship of Doctor Leonard W. Larson of Bismark, N. D., member of the Board, to make a comprehensive survey of the various types of plans through which the American people receive medical services. A year will be required to complete such survey.

### **VETERAN'S HOSPITALIZATION**

Seaborn P. Collins, National Commander of the American Legion, addressing the House of Delegates in Miami last December said he is willing to appoint qualified Legion representatives on a committee to take part in joint Legion-AMA study of veteran's hospitalization. The Board of Trustees appointed a three-man committee to meet with the Legion on the issue of veterans' medical care composed of Doctor Elmer Hess, Doctor David Allman, and Dr. Louis Orr. Mr. Collins said: "We are citizens first and doctors and veterans second," as he urged removal of the veterans' medical care issue "from the area of name-calling and propaganda." The American Legion neither expects nor wants the Government to give carte blanche entitlement to medical care to all veterans.

### **HEALTH REINSURANCE**

Mrs. Oveta Culp Hobby, Secretary of Health, Education and Welfare, addressing the House of Delegates in Miami last December, presenting the case for the Eisenhower administration's health reinsurance proposal said: "The health reinsurance proposal represents what we believe to be a necessity. It offers opportunity for self-help without subsidy." Edwin J. Faulkner, President of the Woodmen Accident and Life Company of Lincoln, Nebraska, on similar occasion, expressed the opinion that the resinsurance program "would be foredoomed to disappoint its proponents," declaring that voluntary health insurance can bring satisfactory protection "to practically all of our people" without a Federal reinsurance program.

### **RADIOLOGY ANNUAL MEETING**

The regular annual meeting of the members and fellows of the American College of Radiology is called for Friday, February 11, 1955, at 10 a.m., Drake Hotel, in Chicago, Illinois.

### **WHO MAY DO SURGERY?**

Quotation from Bulletin of the Joint Commission on Accreditation of Hospitals: "There is no specific answer to the above question. Good surgery cannot be measured blindly by years of residency, preceptorship or number of operations assisted at or performed. Certain individuals, no matter how long or where their training, will never become good surgeons.

"Formal resident training, College of Surgeons, Fellowship or Board Certification are all excellent criteria and a physician desiring to do surgery should be encouraged to set them as his goals. Recognition of the worthwhileness of the above evaluations. The frank, brutal truth remains, however, that they sometimes, though not often, are only a piece of paper; that time can warp a man's judgment and poor health can slow the facilities of a surgeon's hands until he becomes a dangerous man in the operating room.

"Merit alone is the only criterion for judging physicians' surgical abilities. This judgment should be performed by those capable of judging other qualified surgeons, by those who are willing to accept the responsibility and to attest to the public and community that in our judgment this man is capable of doing good surgery'.

"In our present medical setup this means that a staff surgeon should be judged by those other members of the staff who have seen him work, use his judgment and exercise his ability. It becomes a local personal equation in every hospital. It is a terrific responsibility. It can never be decided on a friendship, personality or class basis."

(Continued on Page 97)



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### RELATIONS BETWEEN OSTEOPATHY AND MEDICINE

The AMA Board of Trustees received and approved, and the House of Delegates adopted a progress report from the committee appointed some time ago to study the relations between osteopathy and medicine. The committee, headed by AMA Past President John W. Cline, held several meetings with the American Osteopathic Association. After these meetings and extensive negotiations, the committee made final arrangements for visiting five of the six schools of osteopathy. Doctor Cline since has appointed members of his committee and several participating deans to make on-campus visits of the five schools, beginning January 28. The committee's complete and final report is expected to be ready for submission to the House of Delegates when it meets at Atlantic City next June. The final report will cover the nature, scope and quality of education in schools of osteopathy.

### ANNUAL MEETING — SCIENTIFIC SESSIONS

**T**HE 64th Annual Meeting of your association will be held in Tucson, May 4-7, 1955, with headquarters at El Conquistador Hotel. Through arrangements made by the Scientific Assembly Committee, we are happy to announce participation of the following guest orators who will appear with others on the scientific sessions program.



**Robert W. Oblath, M.D.**

Graduate of the University of California, San Francisco & Berkeley, receiving his doctor of medicine degree in 1945, Doctor Robert W. Oblath interned in Los Angeles County Hospital 1945-46; as Assistant in Medicine, University of California Hospital, in San Francisco 1946-47; Assistant Resident, University of California Hospital in San Francisco, 1947-49; Research Fellow, American Heart Association, Institute of Medical Research, Cedars of Lebanon Hospital, Los Angeles 1949-50; and received appointments as Assistant Clinical Professor of Medicine, University of Southern California; Attending Staff, Los Angeles County Hospital; Clinic Physician, Cedars of Lebanon Hospital; Associate Staff, St. Joseph's Hospital, Burbank; Member, Cardiac Catheterization

Group, Los Angeles County Hospital; Chairman, Publications Committee, Department of Medicine (Cardiology), University of Southern California; and Member, Cardiac Clinic at Cedars of Lebanon Hospital.

Member of Los Angeles County, California state and AMA national medical associations; Los Angeles and California Societies of Internal Medicine; Los Angeles County, California State (Cardiacs in Industry Committee) and American Heart Association; American Association for the Advancement of Science; American Federation for Clinical Research; Associate, American College of Physicians; and Certified (Diplomate), American Board of Internal Medicine (1953).



**Lester R. Dragstedt, M.D.**

Former Professor of Physiology, Northwestern University Medical School, presently Thomas D. Jones Distinguished Service Professor of Surgery and Chairman of the Department of Surgery, University of Chicago, Doctor Lester R. Dragstedt is a member of the American Surgical Association, the National Academy of Sciences, the American Physiological Society, the American College of Surgeons, and honorary member of the surgical societies of Paris, Lyon, Los Angeles, Seattle, Minneapolis, and Detroit.



**Carl A. Dragstedt, M.D.**

Educated at the University of Chicago and Rush Medical College, receiving his degree of doctor of medicine in 1922 and doctor of philosophy in 1923, Doctor Carl A. Dragstedt practiced medicine in North Dakota 1923-26; Professor of Pharmacology in Northwestern University Med. Sch. since 1926 and Chairman of the department since 1942; Chairman of the section on Experimental Medicine and Therapeutics, A.M.A., 1946-47; President of the Society of Pharmacology and Therapeutics, 1949-50; President of the Society for Experimental Biology and Medicine, 1951-53; Chairman of the Pharmacology Study Section of the U.S.P.H.S., 1951-53; and is a member of the Revision Committee of the U.S.P. since 1940 and of the Council on Pharmacy and Chemistry since 1949.

### U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

The lowest death rate in the history of the country and the largest annual number of births were forecast for 1954 by Dr. Leonard A. Scheele, Surgeon General of the Public Health Service of the U. S. Department of Health, Education and Welfare. Dr. Scheele made his statement on the basis of vital statistics reports for the first 10 months of the year.

The death rate for the year is expected to close at 9.2 deaths per 1,000 population, a substantial drop from the rates of 9.6 or 9.7 which have prevailed over the past five years. The absence of any reported outbreak of influenza in 1954, with consequent low death rates for the chronic cardiovascular diseases, was cited as a principal reason for the decline. Infant and maternal deaths were also expected to hit new lows.

Educated at the University of Chicago and Rush Medical College, receiving his degree of doctor of medicine in 1922 and doctor of philosophy in 1923, Doctor Carl A. Dragstedt practiced medicine in North Dakota 1923-26; Professor of Pharmacology in Northwestern University Med. Sch. since 1926 and

Chairman of the department since

Births will top the 4-million mark for the first time, according to preliminary estimates. The expected birth rate of 25.2 per 1,000 population is the second highest in 28 years, and only 5.3 per cent below the peak year of 1947. A continuing rise in the births of third, fourth, and fifth children is probably responsible for the birth increases in 1953 and 1954. No increase in births of first children was expected because of falling marriage rates since 1951.

The marriage rate sank to 9.2 per 1,000 population in the first 10 months of 1954, compared with 9.7 for the same period the year before. Low birth rates during the 1930's, resulting in relative scarcity of young people of marriageable age in the present decade, were held chiefly responsible for the marriage decline.

Divorces in the first nine months of 1954 were down four per cent from the comparable 1953 period, on the basis of reports from 25 areas. Since the 1946 peak, divorce rates have dropped over 40 per cent.

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# ARIZONA *Pharmaceutical* PAGE

## NARCOTIC PRESCRIPTIONS

By Joseph A. Zapotocky, Ph. D.

Pharmacy College, University of Arizona

**A**LTHOUGH physicians and pharmacists are speaking in terms of relaxed controls on some narcotics to permit the pharmacist to fill certain narcotic prescriptions and refills of barbiturates telephoned by the doctor, some government agencies and officials are seeking increased controls. The Council of State Governments is in favor of restricting the dispensing of barbiturates to a written prescription. Telephoned prescriptions and authorizations for refills are too difficult to verify. Only in an emergency would a telephoned prescription be permitted, and, in such event, confirmation must be given in writing within seventy-two hours.

Recently, Attorney General Herbert Brownell voiced the opinion that the prescribing and dispensing of narcotics has grown lax and needs closer supervision. Though there has been an increased search for violators of laws concerning narcotics and barbiturates during the past few years, this heightened activity has led to the arrest and conviction during 1954 of only eighteen pharmacists and four store owners in the United States as narcotic violators.

Since it is the duty of the members of our professions to prescribe and dispense narcotics, it is also our responsibility to perform our duties in strict obedience to the law, else we may be liable to criticism from those who would impose even more rigid regulations on our professions.

Physicians are usually most familiar with the phases of the narcotic law which affect them directly — the annual narcotic tax, the registry number, the purchase of narcotics for office use from a wholesaler or manufacturer, and a record of their use. They, as well as the pharmacist, have to take proper precautions for the storage of narcotics, order forms, and prescription blanks. Theft and pilfering of these items must be prevented — they must be kept out of the reach of individuals who might be tempted to use them for illegal purposes!

The phases of the law which pertain to the pharmacist may be less familiar to the physician and will, therefore, be reviewed here as these regulations often appear to be mere inconveniences to a physician. However, the pharmacist must obey these regulations or face possible prosecution. The law requires a pharmacist to fill only those prescriptions which carry certain basic information. This includes the date, name, and address of the patient, name, address, and registry number of the physician; name and exact quantity of the narcotic to be dispensed; directions for use; and the signature of the physician. To prevent alteration, the prescription should be written in ink, indelible pencil or typewritten. The pharmacist is required to be on the alert for forgeries of the physician's signature, alterations, and fake prescriptions. The pharmacist can usually determine whether the physician's signature seems to be different and, if he feels that it is, he will call the physician to ask for verification. This rules out the writing of narcotic prescriptions by the secretary or nurse. It is illegal for a pharmacist to fill a telephoned narcotic prescription except in an emergency and, under such circumstances, the prescription must be received in writing before delivery is made. A narcotic prescription cannot be refilled — a new prescription must be given if the patient needs more of the same medication. The pharmacist is not permitted to sell narcotics to a physician for routine office use. Such supplies must be obtained from the manufacturer or wholesaler with the usual narcotic order forms.

There are other phases of the narcotic law which affect the pharmacist; however, in order for him to fulfill his obligations in the parts of the law just mentioned he depends on the cooperation of the physician. Only by team work on the part of all members of our professions can we prevent or challenge remarks which insinuate that we are lax in our professional obligations.

# Interesting TOPICS

## ABSTRACTS AND RECOMMENDED READING

(Current Medical Journals)

**ALLERGIC SYMPTOMS IN INFANTS:** Norman W. Clein, Rocky Mountain Medical Journ., November, 1954. The mechanism of allergic symptoms depends primarily upon three factors: (1) Edema of mucous membranes and certain areas of the skin; (2) Spasm of smooth muscle, such as bronchi or intestines; (3) excessive mucous secretions in various glands. It is easily understood how the allergic state may simulate almost any disease. Early recognition of this state in infants and adequate treatment and management will enable the individual to lead a normal life.

**BENIGN LESIONS OF THE BREAST:** John L. Marmichael, Journ. of the Med. Assn. of Alabama, November, 1954. A fairly thorough article. Three common lesions of the breast, fibroadenoma, fibrocystic disease, and papillomata, have the same basic etiology. Any one of these may become malignant and are, therefore, precancerous.

**HISTOPLASMOSIS:** A roentgenographic survey. Oliver and Associates. The Journ. of the Med. Assn. of Alabama, November, 1954. A brief resume of the pathology, epidemiology, diagnosis and treatment, based on 65 cases found in a routine x-ray survey of 29,229 individuals in 44 Alabama counties.

**COUGH:** Differential Diagnosis and Management. Joseph J. Furlong, Calif. Medicine, November, 1954. "Cough is a complex defensive reflex whose purpose is to protect the respiratory tract . . . The meaning of cough as a symptom must be carefully determined before rational treatment can be planned. Recent researches . . . have made it possible for a physician to plan a treatment program on a firm, scientific basis, rather than on tradition."

**FUNCTIONAL UTERINE BLEEDING:** A good short article by Moore, Singh and Holzman, in California Medicine, November, 1954. A practical scheme of management is suggested, including uterine curettage, diet and general measures, cyclic steroid hormone therapy, androgen therapy, hysterectomy, radiation castration.

**ESOPHAGUS.** Diseases and Lesions of the esophagus are presented in two articles in Medical Annals of the District of Columbia, for November, 1954. Michael K. Kurilla writes on Congenital Anomalies of the Esophagus, and George W. Ware on Peptic Esophagitis and Peptic Ulcer of the Esophagus. Both articles are well worth careful reading.

**CHRONIC BRONCHITIS:** A somewhat timely article by Phillips and Associates of Providence, R.I., in Diseases of the Chest, November, 1954. Points in the summary include: The majority of adult males with chronic cough did not have tumor, tuberculosis, bronchial asthma, bronchiectasis or chronic pneumonitis — but chronic bronchitis. Inhalation of cigarette smoke was the most common cause of chronic cough. Chronic bronchitis is the commonest cause of pulmonary emphysema.

**ANTIBIOTICS:** The most common term in medicine today. Among the several good articles on this subject, the following are interesting and well worth perusing: Clinical Use (of Antibiotics) in Management of Infections. Ivan L. Bennett, Jr., Conn. State Medical Journal; the three important considerations in the choice of antibiotics are the type of infection, the etiologic agent, and certain characteristics of the individual drugs.

Antibiotic Therapy, by Jesse W. Hofer, Texas State Journ. of Med., October, 1954.

Penicillin Reactions, by Strauch, Byrd and Eng. Ibid.

Combined Drug Therapy in Upper Respiratory Infection, McLane and Heck, The Journ. of the Med. Soc. of N. J., October, 1954.

Prevention of Penicillin Reactions, Eugene J. Luippold. Ibid.

Oran Penicillin - Antihistamine Combination. Janet L. Eckhardt, The Journ. of the Med. Soc. of N. J., November, 1954.

Cortisone in Ulcerative Colitis. S. C. Truelove and L. J. Witts, British Med. Journ., Aug. 14, 1954.

Some Observations on the Treatment of Ulcerative Colitis with ACTH, Dick and Beckett, British Med. Jour., Aug. 14, 1954.

**THE ARTHRITIDES IN INDUSTRY:** Roy R. Schubert, The Journ. of Med. Soc. of N.J., October, 1954. The relation between trauma and an arthritis developing subsequently is one of the most bothersome question which compensation boards have to deal with. This article does not solve the problems involved, but discusses them very sympathetically.

**CORONARY ARTERY DISEASE - Surgery for:** Crecca and Associates have a very interesting article on this subject in The Journ. of the Med. Soc. of N.J. for November, 1954. "Deaths from coronary disease continue to rise. Medical treatment has obviously failed to stem the rising tide of coronary deaths. The authors believe that surgical revascularization of the heart is the answer. They review the various surgical techniques and recommend procedures." This ought to interest all of us, because any one of us may be heading into a coronary artery catastrophe.

# Woman's AUXILIARY

## CIVIL DEFENSE — STATE OF ARIZONA

ARIZONA, in spite of the protection afforded by its geographical location and sparseness of population, houses two cities, Phoenix and Tucson, which are recognized in Civil Defense as National Target Areas. Phoenix receives this classification by virtue of being the state capital, Tucson because of its strategic air base and several large defense industries.

Through progress in Civil Defense must move slowly, much has been accomplished in the state within the past year. "Connelrad", a national public alert system by means of radio, has been set up throughout the state, tested, and proved efficient. "Comillum", a nationwide light pattern system, is in the process of being organized. It will replace the blackout of World War II. The extraordinarily bright lights of the city will be dimmed, while the dimly lit areas will be brightened causing an all over glow confusing to enemy planes.

Casualty clearing stations have been planned in Pima County. Such centers are organized in schools, churches, and clubs, chosen for the most favorable distribution throughout the city and the facilities offered for emergency First Aid Stations. Personnel manning these are Doctors, Nurses, Dentists, Litter Bearers, and persons trained in First Aid.

In many districts of Pima County Warden Posts have been assigned and manned. Ten rescue instructors have been trained along with two radiological teams. The Air Force plans to have an Air Observer Corps underway by this summer.

In Maricopa County Civil Defense training has been started in the schools and Civil Defense drills are in effect there. A mass feeding program in Cochise County has been instituted and trial runs made. Through Cochise County runs Arizona's main evacuation highway, thus explaining the need for such a feeding program.

To accomplish our objectives for 1955-56 Civil Defense is in urgent need of volunteers, both lay and professional. This is a day when the doctor and lawyer, housewife and secretary, mason and farmer must all band together for

the protection and preservation of our way of life.

Leila S. Shallenberger  
Tucson, Arizona

## PUBLIC RELATIONS

IN recent years, the medical societies all over the country have become aware that not only must the doctor render good medical service; he must also practice good public relations. Recognizing the fact that creating friendship and understanding is vital to the preservation of our present medical care system, the committee on PR of the Woman's Auxiliary to the American Medical Association, chaired by Mrs. Richard R. Reynolds has established a program to complement and supplement that of the A.M.A. Following is an outline of purpose of this program to aid county auxiliaries:

1. To develop grass roots public relations whereby every Auxiliary member will feel a personal responsibility to assist in creating better public relations
2. To make every member aware of her responsibility to the community through service.
3. To acquaint the public with the activities, purposes, aims, and accomplishments of the Medical Association and its Auxiliaries
4. To create an awareness of the health services available in each community
5. To help mold public opinion for the improvement of the health of the people in the truly American democratic way

In order to realize the foregoing, it is suggested that we know our community needs. A survey should be made to establish these needs as well as to show what has already been accomplished. We should seek to: improve conditions which need improvement; acquaint the community with what we are trying to do; and gain community cooperation. Likewise, we must establish wholesome cooperative relationships with other agencies serving the community by accepting responsibility on health committees when asked by organizations to which we belong and by taking an active part in civic affairs.

There are many ways in which we may serve our community both as individuals and as auxiliary members. Many clubs are active in the field of health and health education and we should support them. Too, we can do much by supporting the committees within our own auxiliaries. *Today's Health* is an excellent PR tool, and we can assist in having it placed in libraries, schools, beauty shops, and in the hands of parents. We must help increase loan funds and establish scholarships for Nurse Recruitment. This is a wonderful opportunity to educate the public in the need for more nurses. The American Medical Education Foundation needs our contributions. Each and every Aux-

iliary member should assist the Civil Defense Committee by participating in some Civil Defense activity. We must cooperate with the Legislative Committee in supporting or opposing pending legislation.

There are many more ways in which we can work with our Medical Society — i.e., planning Health Fairs, Health Days and Health Forums to acquaint the community with available health resources ready to serve them. Remember: PR is not publicity; it is doing the right thing and communicating the fact to the community.

Mrs. John A. Eisenbeiss, Chm.  
Committee on Public Relations  
Ariz. State Medical Auxiliary

### ADVISORY COMMITTEE

The annual meeting of the Advisory Committee of the SJAB, held in Miami, was the last session at which Dr. Stanley B. Weld will preside as chairman. Because of his years of service in behalf of the State Journal Group, the members of the Advisory Committee, by unanimous vote, passed a Resolution of Commendation for Dr. Weld. His present term of office

which expires on December 31, 1954, brings to a close a 12-year period as a member of the Advisory Committee. For the past 10 years, Dr. Weld has been the able Chairman of our Committee. In his post as Editor-in-Chief of the CONNECTICUT STATE MEDICAL JOURNAL, he will continue his support of the bureau program.

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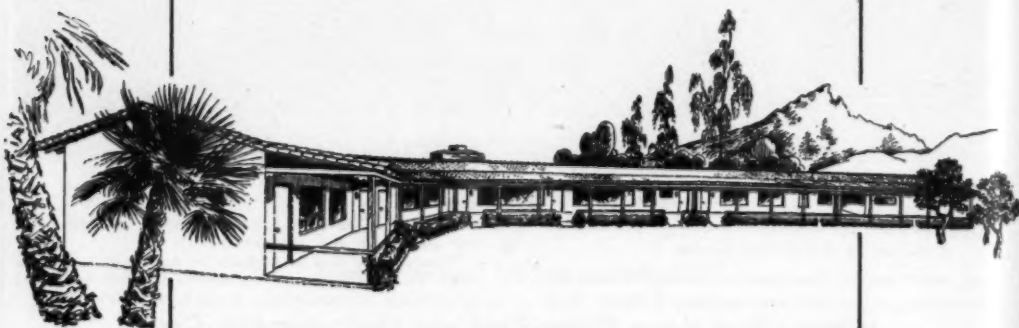
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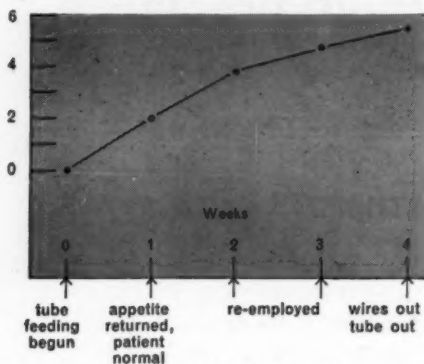
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<sup>†</sup>Therapeutic Nutrition, Publication No. 234, National Research Council.

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\*Pareira, M. D.; Conrad, E. J.; Hicks, W., and Elman, R.: J.A.M.A. 156: 810, 1954.